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The Canadian Journal of Medicine and Surgery

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CONTENTS

EDITORIAL

The Eye of the Needle.....1
Botulism 3
Group Medicine.....5
Graves' Disease.....7
Obstat Principiis.....9

ORIGINAL CONTRIBUTION

The Prevention of Cancer, by J. W. S. McCullough, M.D.....11

SELECTED ARTICLES

Author Physicians.....17
From My Note-Book.....19
Real Preventive Work.....25
Where to go for Money.....30
The General Practitioner and the School Medical Service.....38
Home Disinfection in Pulmonary Tuberculosis 39
Nelson's Medical Life History.....42

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VOL. 51. TORONTO, JANUARY, 1922 No. 1

Editorials

The Eye of the Needle.

One-half of the young men desirous of entering as students of medicine in the University of Toronto were not admitted. We venture to say that a goodly number of those turned down would have made good timber; while an equal number of those accepted will be found to be square pegs in round holes. We do not believe any cursory examination of the applicants, such as could only be given, would indicate the character of the man, his general intelligence, or the other qualities that would make him a good practitioner of medicine. These things are often difficult to predicate even at graduation.

Therefore, these men ought all to be given, at least, a year's trial so that a somewhat more reasonable amount of knowledge of them may be gained. The world is short of doctors; and while it is im-

possible to give all men all the individual training desirable, as many as possible should be tried out.

The University is supported by general taxation —a portion of which has been paid by the parents of the candidates and in part indirectly by the young men themselves; therefore, every man who has qualified educatively ought to be given a chance to take up the study he has decided upon. This is his right.

Botulism.

With the sporadic outbreaks of botulism here and there throughout the continent, physicians should be alive to the possibility of its appearance in their practise. Health authorities should keep the public posted as to its dangers and its prevention.

The disease appeared originally in sausages. In too many cases the sausage is a despicable food—the chopped up remnants of a butcher shop, which, too often, have begun to deteriorate and become mal-odorous.

The public health officials would do well to have their inspectors examine periodically every sausage machine. We've been told by the mother of a butcher's clerk that anyone who had an intimate knowledge of the condition of the sausage grinder in the average shop would be cured of the habit of eating sausage.

A family in New Jersey—parents, two girls and a boy took some home—canned beans in a salad for supper. The girls, who had a dance on, ate some of the dish hashed, rushed off to the dance—and died. The son, after taking a bite, said it was not fit to eat. The proper and economical mother ac-

cused him of bad manners, and partook herself—to show her son the better way. The father, however, after a smell of the salad, declined with thanks. Father and son escaped, but the mother was ill several weeks.

It appears there are at least two types of the bacillus botulinus and a number of strains. One lot has spores which are killed at relatively low temperatures; the other has spores killed only at relatively high temperatures. These organisms produce a toxin which in very minute doses may be fatal. The toxin is destroyed at 80c.

Not a single can of canned food that shows the slightest evidence of spoilage should be used, no matter whether put up at home or by commercial houses. We must not eat anything that shows the slightest sign of spoilage or fermentation, or has the slightest abnormal odor. And it is wiser to heat all preserved foods just prior to partaking them to the temperature of boiling water for five minutes, to make them safe eating.

Group Medicine.

During the last five years a good many group medical clinics have been inaugurated in various parts of America. Satterlee in the "New York Medical Journal" contributes a summary on the subject in relation to focal infection.. This type of infection enters every branch of medicine—etiological, or in a contributory manner. Syphilis, tuberculosis, erysipelas, protozic and parasitic infections all belonging to this category. There was a large class of less well recognized focal infections due to the various strains of streptococci and also the colon baccilus; but these were not universally accepted. Probably 60 to 80 per cent. of the average run of hospital patients showed evidences of focal infection in teeth or tonsils, mainly. Infected adenoids were quite frequent, and less frequent otitis media, infections of the prostate seminal vesicles, rectum and urethra. Infected cervices had been enucneated with good results in the New Jersey State Hospital. Removal of the foci was of prime importance.

Seeing then that these foci might exist in so many portions of the body it was quite logical that in order to remove them it would be very often necessary for internists, surgeons and other specialists

to co-operate. This was what was done in hospitals. Some day we might see a focal infection ward, with a separate laboratory. Outside of hospitals men should form groups. The essentials were: An **Internist** to make a provincial diagnosis, outline the essential examinations to have charge of the patient before and after examination and assume responsibility. A surgeon with a keen appreciation of the medical needs of the patient, and skilful. Both men should be good at interpreting radiographs.

An ear, nose and throat man; a dental surgeon; a radiologist; a laboratory; and a special bacteriologist. There should also be a technician for gastric contents, and other secretions. A follow-up system, with a nurse or clerk in charge should undertake history taking and social service.

There should be a dental hygienist; special consultants, and a department of hydro-therapy and massage.

Graves Disease.

In a contribution to the "British Medical Journal," Prof. Geo. R. Murray, among many other good things, speaks of the earlier symptoms of this malady. For some months prior to any well recognized symptom there is often a constant sense of fatigue—due probably to increased metabolism of the tissues, comparable to exhaustion during the ambulatory stage of a fever of gradual onset. Patients may lose weight even though more food is taken. There is a change in disposition—restlessness and a tendency to be agitated or worried by trivial causes. There may be marked mental depression or anxiety alternating with periods of agitation. A fine tremor can usually be seen or felt in the hands when the arms are outstretched and fingers spread. There is a persistent acceleration of the pulse. The heart responds too readily to slight exertion or emotion, which the patient is often conscious of. Excluding other causes of cardiac irritability, when the above symptoms alone are present they indicate hyperthyroidism. If associated with an enlarged thyroid gland they indicate a toxic goitre. The patient may show no exophthalmos. He may have a somewhat staring or startled expression, due to widening of the palpebral fissure, caused by slight spasmodic contraction of the upper eyelid—sometimes unilateral at first. In many cases there is slight increase in moisture of

the skin. Former tendency to chillblain may disappear.

In those prone to colds this tendency diminishes as thyroidal activity increases, only to return when hyperthyroidism ceases. Though these symptoms are present there may be no obvious goitre.

Prof. Murray proceeds: As soon as hyperthyroidism or toxic goitre is recognized begin treatment. Rest in bed is advisable for a few weeks, then 12 to 16 hours a day. A liberal diet of milk, fats and carbohydrates should be regulated according to the necessities of each case. Red meats and meat extracts should be avoided, as they tend to stimulate thyroid secretion. Prof. Graham recommends X-rays when they can be conveniently applied at short intervals, and radium when long intervals between the applications are desirable on account of distance from home. As large a dose of X-rays is given as can be tolerated without injury to the skin. . . . If these methods are not available a mild faradic current may be applied by electrodes placed over the goitre and at the back of the neck for an hour twice a day. . . . Arsenic given in small doses for several months has proven the best drug for this disease. No consistently good results have been observed from organic extracts, except, perhaps, suprarenal glands. . . . The various crises and complications arising require treatment—largely symplomatic.

Obstat Principiis.

To stop the beginning of troubles is to take the ounce of prevention which is better than a pound of cure. The work in the casualty clearing stations in the Great War was a demonstration of the truth of the statement in so far as surgical procedure is concerned. In the branch of internal medicine Sir Jas. McKenzie has shown how essential it is for physicians to discover the primary symptoms of disease; and, therefore, how important it is to have experienced diagnosticians in our hospital out-patient departments, instead of the tyros usually found there.

Our life extension institutes, inspections of school children, baby welfare centres, and other activities of our public health departments—municipal, provincial and national—carry the principle a step further.

The introduction of these striking features in the prevention of disease, and its early diagnosis when once established, its prompt and efficient treatment when diagnosed, mark a new era. Their importance should be realized by every practising physician and surgeon. We fear there is too much apathy in the profession in regard to these points. Every practising doctor has a fine measure of responsibility in doing all he can in his community and amongst his families to properly isolate infected cases, to discover any abnormalities in those who consult him even with apparently trivial symptoms by giving a thorough examination: and by prescribing as promptly as possible such remedial measures as may be deemed necessary.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contributions

THE PREVENTION OF CANCER*

BY DR. J. W. S. MCCULLOUGH, D.P.H., CHIEF OFFICER OF HEALTH, ONTARIO.

I am led to present to this Society the subject of the Prevention of Cancer for several reasons. The disease seems to be increasing. At any rate the death rate is increasing in comparison with, for example, tuberculosis. In the last 20 years the mortality curve for cancer has risen markedly while that of tuberculosis has declined considerably. Cancer in Ontario is fourth on the list of those diseases causing the highest death rate. In the United States it causes upwards of 80,000 deaths a year and in the same proportion the Canadian mortality must be 8,000 or 10,000 annually. The disease shows itself chiefly at or after middle life; its appearance is often like a bolt from the blue to its victim who in many cases is the subject of great suffering for a year or two before death occurs.

The patient frequently fails to consult the physician until the disease is far advanced and in some cases, at least, the physician overlooks certain symptoms which should put him on his guard. Opinion seems to be that more lives can be saved by the education of the public and the medical and dental professions in the causes of prevention of cancer than by any improvement in surgical technique or by any combination of treatment with the knife, cautery, radium or roentgen rays, particularly in such situations as the tongue, lips,, breast or rectum.

*Read at the meeting of the Peel County Medical Society, Oct. 4, 1921, by Dr. Jos. McCullough, D.P.H., Chief Officer of Health, Ontario.

Cancer is an ancient disease. In Egypt, India and Persia it was treated by arsenic paste as far back as 1500 B.C. Hippocrates used the cautery for cancer more than 400 years B C. Celsus at the time of the birth of Christ employed the knife for the removal of cancer and vessels were ligated to check the growth of inoperable tumors, a method revived a few years ago. In recent times we have had as new treatment serum therapy, endocrine therapy, the roentgen rays and radium, but none of these methods avail if the disease is far advanced.

The Causes of Cancer.

(a) The Acid Theory—

The greatest number of cancers occur in the normal acid areas of the body. The stomach is the organ of highest acidity and here occur 1-3 of the cancers of men and 1-5 of the cancers of women. The large bowel is acid and here are found many cancers compared with few in the alkaline small bowel. The urinary bladder and the uterine cervix, both of which are bathed in acid secretions present many cases of cancer and in the uterus and mammary gland the acids formed by lipoid degeneration may be a possible local factor in causing the disease.

(b) Traumatism—

Clinical observations show that epithelial areas which suffer injury or irritation are liable to develop cancer, for example, cancer of the uterine cervix following laceration; cancer of the lip following fissure or of the use of the pipe; cancer of the tongue or cheek from a broken tooth; the degeneration of scar tissue, cancer of the gall bladder and of ulcer of the stomach. It is said that hot food and drinks are provocative of cancer of the stomach and it is interesting to note that gastric cancer is less frequent in women who because of their serving the meals allow their own food to become cold. Cancer of the breast and lip often follow irritation and inflammation of these structures. The well-known chimney-sweep's cancer of the scrotum due to the irritation of soot has disappeared with the disappearance of the human sweepers. Bloodgood of Baltimore says that in a recent investigation of 260

cases of cancer of the tongue, the evidence seems convincing that this cancer is due to long and continuous chronic irritation by tobacco, repeated burns from smoking, by continuous irritation or direct wounds of dirty rough teeth or improperly fitted plates.

Early Signs of Cancer

Cancer of the tongue is a disease of men who smoke in excess and carelessly, or who chew tobacco constantly and in addition neglect the teeth. The most common warning is leukoplakia in single, multiple or diffuse white patches in the mouth. Another common warning is a local area of irritation from ragged dirty teeth. Everyone of us is familiar with such examples. Excepting the stomach the rectum is the most frequent site of cancer in the alimentary canal. The earliest symptom is constipation which is the more noticeable in those heretofore regular. This is said to be due to an irritation of the sympathetic nervous system and loss of tone in the bowel. It is not as a rule due to the size of the tumor or to obstruction. The passage of blood and mucus with an imperative desire to move the bowels followed by an explosive and unsatisfying movement occurs except when the tumor is situated close to the anus, and then the only symptom may be the passage of a little blood. There is often an indefinite feeling of uneasiness in the pelvis but the frequent and urgent desire to move the bowels is the symptom which dominates all others. This becomes increasingly urgent, the patient is disturbed early in the morning and through the night. The symptoms of loss of weight, cachexia, and usually pain are late signs of malignancy. Cancer of the rectum occurs chiefly at two points. The most frequent one is at the junction of the sigmoid and rectum, and the other at the anorectal junction. The former site gives no pain because this tissue has no spinal nerve supply. Patients expect pain with cancer and its absence is unfortunate because pain of all things will stimulate a person to have the cause investigated.

The American Society for the control of cancer states that in the year 1918 there were nearly 12,000 deaths from cancer of the uterus in the United States. Early pain is an infrequent symptom

and in the majority of cases the disease is far advanced before the patient is seen by the surgeon. The reluctance of most women to submit to examination for suspected uterine derangements is the cause of the late and unsatisfactory treatment in these cases. A lump in a woman's breast is often disregarded or concealed until there is pain or even a degeneration of tissue.

In view of these facts it seems to me that there is urgent necessity for a wide publicity campaign against cancer. The annual aggregate of deaths is a large one, greater after 40 years than that from tuberculosis or pneumonia. The death rate has risen in 10 years from 65 to 77 per 100,000. At ages over 40 it kills one in eight among women and one in fourteen among men.

The chief facts to put before the public are:

(1) Cancer in the early stage is curable.

(2) In the early stage there is no pain or symptom of ill-health.

(3) Any lump or mass in a woman's breast at any age and more particularly after 40 should be investigated by a skilled physician or surgeon.

While there are tumors of the breast due to other causes than cancer the presence of a lump in a woman's breast should at once arouse suspicion and no means of diagnosis should be neglected until the question is absolutely settled. The physician should impress upon his patients the importance of at once bringing the fact of a lump in the breast to his attention.

(4) Any bleeding after the change of life, however trivial, and all irregularities of menstruation should be referred to the physician.

(5) Any wart or sore on the lip.

Cracks or sores on the lip in which healing is delayed and continued sealing of the mucous membrane of the vermilion border of the lip are frequently pre-cancerous conditions. They readily subside when the irritation such as from a clay pipe is removed and

when subjected to a light radium treatment. If neglected they are followed by enlargement of the submaxillary glands and unless subjected to early surgical treatment are fatal.

(6) Any white patch or sore on the tongue or inside the cheek should be investigated.

(7) If the person is a smoker or chewer of tobacco, the habit should be stopped and attention given to any sores or cracks or patches about the mouth and tongue.

Patches of leucoplakia on tongue or cheek are cancerous conditions. They are found in persistent and careless smokers, particularly pipe smokers, as well as amongst tobacco chewers. I have frequently observed that they disappear when the cause of the irritation is removed.

(8) Jagged teeth should have attention and warts or moles on the skin liable to irritation should be removed.

(9) Any bleeding from the bowels especially after 40 years of age must not be set down as a case of piles or a fissure of the anus. The most rigid examination should be instituted in order to determine with certainty the exact cause of the hemorrhage and if any lump, however small, is discovered, it should receive appropriate treatment.

In respect to cancer of the uterus, Knowsley Thornton speaking at the meeting of the British Medical Association as long as 1895, says:—

"How is an early diagnosis to be made? Clearly by neglecting no menstrual departure from the normal, however trivial it may at first sight appear, but at once to encourage the patient to accurately describe symptoms, and above all to insist in the most determined manner on a local examination. Here it will be apparent that I, as a consultant, appeal for help to the great body of those who are now listening to my remarks, to my professional brethren engaged in general practice. I, in common with those situated as I am, too seldom have an opportunity of diagnosing early, because the majority of the patients come to us too late, when the

disease has already advanced nearly, or quite, beyond the limits of surgical aid. Let me then appeal to all engaged in family practice who listen to me here, and to that larger body who may read my words when reproduced in the medical journals, to sternly cast aside that too great modesty, or that tendency to treat as trivial small symptoms, and at once to take alarm about, and carefully investigate, every case in which there is brought to their notice an abnormality in menstruation, or a vaginal discharge of any kind, however trifling. A very grave responsibility lies at the doors of the medical profession for the small progress made in the early diagnosis of uterine cancer and its successful treatment. How constantly is the consultant told: 'I mentioned it to my doctor weeks or months ago, but he said, "Oh, it is nothing; I will send you a little medicine or a little injection, "and never even suggested any internal examination, so I did not like to trouble him again till the pain became so bad or the discharge so troublesome, and then he examined me and said I must have special advice at once.' Invaluable weeks or months gone, and then the verdict of the consultant, 'It is not a case for operation,' which really means, 'You have come too late,' but cannot be so candidly expressed. because he must guard the reputation of his professional brother. I admit that the false modesty of the patient, especially in some classes of society, makes the position a difficult one, especially for the young family doctor, but let me implore you all to awake to what is at stake, and to be firm in your demand for an examination, and if you have any doubt after such an examination, to urge that the patient should at once seek the advice of some one who has larger opportunities than yourself for forming a sound opinion. I will go one step further, and ask you, if there should be any to whom such a temptation comes, never to go on treating a case in which there is a shadow of doubt, either because you doubt or because you want practice; if the case is susceptible of treatment at all, it is only surgical treatment which can avail, and that of so severe a kind that it requires the knowledge of the specialist if ever any disease did or does require special knowledge and special skill in operative treatment."

Selected Articles

AUTHOR PHYSICIANS—DR. CONAN DOYLE.

Although Sir Arthur Conan Doyle, the creator of Sherlock Holmes, was for several years a practising physician, it was foreordained from the very beginning of his career that literature rather than medicine should be his life work. He began writing stories of adventure, his biographers tell us, at the feeble old age of six. Against such precocity what chance was there for mere medicine? Altogether Dr. Doyle's medical activities covered a period of about ten years, not counting the time he spent in South Africa during the Boer War, when he was honorary senior physician and registrar in the Langman Field Hospital.

Dr. Doyle was born in Edinburgh on May 22, 1859, and was graduated from Edinburgh University in 1881 as an M.D. A year later, after a voyage to South Africa, he began practising in Southsea, but the practice of medicine to him was more of a makeshift than anything else, despite the elaborate preparation he had made for it at Edinburgh and in Germany. All through his student days he devoted his leisure hours to writing, and in one of the professors at Edinburgh, Dr. Joseph Bell, a man of astonishing analytical and deductive powers, he found the original from whom Sherlock Holmes was subsequently drawn.

It was in 1878 that his first story was published in *Chambers' Journal*—a romance based on an old Kaffir superstition, but it was not until nine years later, when he was attending patients in Southsea, that his *Study in Scarlet* came out. It was in this volume that Sherlock Holmes and Dr. Watson made their first appearance, but the popularity of the book was not astonishingly great nor the royalties from it large. Dr. Doyle continued the practice of

medicine. In 1890 his *The White Company* and *The Firm of Girdlestone* were published, and he left Southsea and went to London as an eye specialist. Soon thereafter the royalties from his books and the checks for his serials and short stories began to pour in, and he forsook the medical profession forever.

What the loss to the medical profession may have been is uncertain, but there is no doubt that the gain to literature was considerable. As a writer Dr. Doyle has firmly established himself in English literature. Few writers have been more versatile than he. We think of him mainly in connection with the Sherlock Holmes stories. Probably on these his greatest fame will rest, though critics contend that from a literary standpoint his best work was done in the field of the historical novel—*The White Company*, *Micah Clark*, *The Refugees* and others, tales of olden times full of action and hairbreadth escapes, good description, convincing atmosphere, and painstaking fidelity to detail.

Dr. Doyle is also a poet and historian. Two volumes of poems —*Songs of Action* and *Songs of the Road*—stand to his credit, and in the field of history he gave us two volumes on the Boer War and was Britain's official historian of the British campaigns in France and Flanders during the world war. The British Government gave him sole access to official records and other sources, from which he compiled the six volumes which tell of the British army's part in the struggle against Germany.

As if this were not versatility enough, Dr. Doyle also has won laurels in the playwriting field. Perhaps the best known of his work in this line is *Waterloo*, a one act play written in 1894, in which Sir Henry Irving played the leading part, both in this country and in London.

However, it was Sherlock Holmes who gave Dr. Doyle his tremendous popularity, a popularity that has had few parallels in literature. With these stories of crime detecting he set a vogue which brought out a host of imitators. As for detective stories to-day on the Holmes model, their name is legion. This is not to say that Dr. Doyle was the first to write a detective story. The

controversy over whether he or Edgar Allan Poe created the detective story is a literary *cause celebre* which has raged for many years. Certainly Poe wrote the first detective stories, but just as certainly Dr. Doyle created the modern detective as he exists in the literature of our time.

In all Dr. Doyle's stories there is a masculine, healthful and courageous spirit. His pages are stimulating from first to last. He sees life as a whole, and his outlook is broad and genial. His is a sane philosophy of life, and one does not have to be a good guesser to size him up for a man of action, an outdoor man, a devotee of all outdoor sports, who has been whaling in the Actic seas, has made balloon and airplane flights, has been skiing in the Swiss Alps, and is a crack rifle shot and an inveterate golfer. Time was when he was a formidable foe at football and cricket, but advancing years have crowded those activities into the background.

In recent years Dr. Doyle has become greatly interested in the occult science, and is one of the staunchest upholders of the theory of spiritism. In all Dr. Doyle's writings only one volume is of a medical nature and that in no wise technical—*Round the Red Lamp, Being Facts and Fancies of Medical Life*, published in 1895. Dr. Doyle was knighted in 1902.—*New York Medical Journal.*

FROM MY NOTE BOOK

By Morris J. Balen, M. D., Philadelphia.

A Clinic By Dr. John B. Deaver.

(Enter John B., acknowledging thunderous applause from the benches.)

"Good morning, boys. We have several interesting cases to show you this morning. First, let us briefly review the cases you saw out at the German yesterday. You will recollect, gentlemen, that the first was a case of chronic appendicitis with misleading symptoms.

Of course he is doing very well now. As for that renal case, let me say to you in that connection, that he had a rock in his kidney. Now that's no reflection on the X-ray men; but lacking calcium salts, the stone does not throw a shadow, and consequently, the X-ray did not reveal it.

(Doctor Deaver reads history.) "Patient had indigestion for fifteen years. (Pause.) Indigestion! Oh, it is the greatest sinner that occupies the abdominal cavity. Now, doctor, what is your masterly diagnosis?"

Medicus in embryo.—"Duodenal Ulcer."

Doctor Deaver—"You are right. The typical ulcer you'd diagnose over the telephone, by correspondence, by conversation, by the anamnesia alone. Don't you think you'd know a duodenal ulcer if you met one on Darby Road? (Reads) "Ulcer was 'con-tem-po-ra-neous'—the diction of the medical men is just as elegant as their diagnosis. Perforation spells purgation; hyperacidity spells ulcer. It is our practice to excise an ulcer, for we have faith. Faith! Ah, what it is to have faith! Faith in what?"

Chorus—"The aseptic scalpel!"

J. B. D.—"While the patient is being prepared, you'll be doing what?"

Chorus—"Cerebrating!"

J. B. D.—"Get him under! Get him under! Pulse all right, Miss? My patients are very often doctors, nurses and preachers, so that any other recompense I get is negligible, anyway. (The famous Deaver Wink.) A man who does not always put himself in his patient's place is unworthy to practice medicine. The doctor who looks at the money side alone hasn't the spark of inspiration. It is not hard work; it is pleasure; it is a recreation, indeed. The stomach, as you know, is the mouth-piece of the alimentary canal. A little more ether, Miss! Ether is the anesthetic 'par excellence' without a shade of doubt. Now there are extenuating circumstances in the trials and tribulations of the surgeon, as you can readily appreciate. You send them to Carlsbad and invite disaster. Medical treat-

ment would here be a continuous performance. I have often thought that the medical man should change his name and call himself the externist, for the surgeon is the real internist. We teach you that there are six senses: touch, sight, hearing, taste, smell and common sense. We must face the issue, boys, as that late and great surgeon, Murphy, faced it. Grasp the opportunity, for the open door will not always remain open. The issue here will now be decided by the aseptic scalpel and bloodless interference. No patient should die of external hemorrhage. You are master of the situation. Boys, in intra-abdominal surgery, what is the rule?"

Chorus—"Cut well, sew well, get well!"

J. B. D.—"And STAY well! Ah, lots of pathology here! A conglomeration of pathology! And the more the pathology the bigger the hole. (Enlarges opening.) This is what you might call an 'autopsy in vivo.' Retractor, please. Thank you. Easy easy, thank you. Sponge, bitte. Much obliged. Miss Irwin, put your hand in here and tell me what you feel? Something hard Right—ah, that touch of a woman! And this is a living picture. You don't see those at the Stanley, do you, Miss Irwin? (Wink.) We are after results. (Excises ulcer.) What a thing it would be for the patient if the surgeon could always be—what?"

Chorus—"Satisfied!"

(Doctor Deaver closes abdomen, then points to scar of appendectomy.)—"It would be better for humanity if more had this scar. You can read that language, the hand-writing on the wall. Heed the sign boards at the cross-roads, that he who runs may read. Now, before we go any further, Miss——, see that smile of confidence! (Wink.) Ah, what it is to have confidence! Now, Miss, how many small sponges did you start with?"

Pupil Sponge nurse—"Fifty."

J. B. D.—"How many have you on the floor?"

P. S. N.—"Thirty-five."

J. B. D.—"That leaves fifteen to be accounted for. How many on the table?"

P. S. N.—"Ten."

J. B. D.—"You want five? Five you shall have. One, two, three, four, FIVE. Just as easy! How many instruments missing? None? What does this indicate?"

Chorus—"Efficiency!"

Doctor Deaver—"The next case is one of Appendicitis. (Reads.) He was seized with sudden severe pain in the right iliac fossa. Pain is the language of a suffering nerve! And the appendix is the great offender. It is the chief source of trouble. Appendicitis is the most common intra-abdominal disease. You must know that every appendix is a diseased appendix. The doctor who says differently, either has no work to do, or else he is economizing the truth. So when there is doubt, play safe. Do not play the market; that is gambling. What will dispel the mystery?"

Chorus—"The aseptic scalpel!"

J. B. D.—"Ah, the aseptic scalpel, which dispels the mystery and reveals the truth to the light of day; and truth is mighty! If you can't do it, better let the knife rest in peace in its cage. The surgeon must have the hand of a woman and the heart of a lion. (Appendectomy and searing of stump.) What does this do to the bugs?"

Chorus—"It puts them to sleep."

J. B. D.—"Right! What kind of sleep?"

Chorus—"Everlasting sleep!"

(Dr. John B. closes wound and proceeds to count sponges.)

"The next case which I shall bring before you presents an acute abdominal condition. *Festina Lente* is our motto in such a case. It belongs to the domain of the medical man. The surgeon cerebrates and deliberates when the season for opening is inopportune. Formerly we used to operate in acute peritonitis. We slaughtered them. I slaughtered them. Now we know better. We sent them to their heavenly and not their earthly kingdom. We sent them to eternity. When you hear of a death in these cases, somebody has been to blame. On general principles, adopt a policy of watchful expectancy. When I am called at night to see a patient with an acute abdominal condition, I say to my

wife: 'Put him on regulation,' which means anatomic and physiologic rest, and I go back to sleep. And I sleep all night. Boys, you cannot surpass Nature, but we can assist her and must work with her. You dare not walk into an acute belly, lest you disturb Nature's barriers. If you have to get in, then get in quick and get out quicker than you got in. Let Nature alone. Masterly inactivity should be your golden rule in such a case. We send these patients to the hospital, put them on regulation and masterly inactivity; we keep the doctors away, and the results are very gratifying. We'll listen to the abdomen. A silent belly! Not a sound is heard but the pulsation of the aorta. I dread to think of it! Above all things, boys do not plurge an acute abdomen. Let Nature alone, as it were. If you purge a case of acute appendicitis, you are—what?"

(Turns to student who is taken unawares)—"You must cerebrate rapidly, my dear sir! (Points to head.) It must not contain what?"

Students in chorus—"Saw-dust!"

(To Nurse)—"Give the doctor a hypo of cerebrin! The answer is—what, boys?"

Chorus from the benches—"Lord High EXECUTIONER!"

"Yes, executioner. You have been well trained. How does that rhyme go?

"Perforation means purgation.
In an appendix kinked in bad;
Food and drink worry him,
And aperients drive him mad."

"Digest it! Assimilate it! Metabolize it! As Mr. Moynihan says, 'There's hope!' But when the patient is *in articulo mortis* it is too late. Your rule here, then, is rest, anatonic and physiologic rest."

"Our next patient is fair, fat and forty and belches gas. This alone is sufficient to establish the diagnosis; to wit: gall-bladder trouble. She complains of exquisite tenderness over Mayo Robson's point. (To Intern.) From your extensive knowledge of the subject, doctor, this is a sign of what?"

Intern—"Pus, the result of infection."

J. B. D.—"Your deduction is correct and it is evidently based on your va-ast experience. (Reads.) She had one of those 'gynecological operations'—a successful curettage. Any wonder she is on the table? The patient now comes back; that is faith. Faith is more recompense to a surgeon than money. It means gratitude. She has confidence. Confidence and faith they always mesh. In all these cases of gall-bladder infection, we must return to our first love, and seek the cause in the right iliac fossa. Now, doctor, are we all ready? (Gridiron incision over McBurney's point discloses an inflamed appendix.)

"Just as I suspected! A diseased appendix; an infected appendix! Infection! Oh, what a beautiful subject it is for a sermon! Infection! These cases are often perplexing. Like the Irishman, I kept up a 'divil of a thinkin' in arriving at a correct diagnosis. Con-se-quen-tly we decided to operate. When there is not a shade of doubt as to the real trouble we resort to the aseptic scalpel. When the diagnosis is at all questionable as to upper or lower abdominal trouble, we make a compromise incision, so that we may take a peep into the pelvis at the same time. The surgeon works by sight and not by faith. Give me, then, the aseptic scalpel. Ah, what pathology! See the adhesions! Ah, a bond of union! Now, Doctor Pfeiffer, you must bring about a solution, a divorce. (Assistant frees adhesion.) Where there's smoke, there's a fire; where there are adhesions, there's a peritonitis. Sponge, bitte. Thank you. Now, Miss, put your hand in there and tell me what you feel. Magis what? Yes, magic touch—that delicate hand of a woman and heart of a lion, which means courage. In this situation my prostatic nail is of some help to me. I manicure my own nails. It would be very embarrassing if I had to say to the manicurist: 'Spare that prostatic nail!' Remember, you must first get rid of the adhesions. You can't say, you are master of the situation in the presence of a conflagration."

(Inserts probe in common duct.) "Now we'll go sailing down the common duct and say 'good-afternoon' to the duodenum.

(Probes cystic duct.) Halt! The gate-way is closed. The obstruction is due to gall-stones. We must remove the cause. (Cholecystectomy.) An empty house is always better than a bad tenant, and so we say 'good-bye' to the gall-bladder. (Opens gall-bladder, which is full of stones. Drops them into a pan.) Here they are—gall-stones, monuments, tomb-stones erected to the memory of the dead bacilli lying within. The surgeon should work with the bacteriologist, and so we will take a smear for culture. Before we close the abdomen, we will insert a rubber tube for drainage. (To Intern): Where did you place the drain?"

Intern—"In the sub-hepatic fossa."

J. B. D.—"Right! He's getting there. He's in the embryonic stage now. That is what we call team-work; that is meshing; smooth sailing. And that is—what?"

Chorus (in wild burst of surgical inspiration)—"EFFICIENCY!"

Exeunt omnes.

REAL PREVENTIVE WORK IN A WISCONSIN TOWN

A satisfactory working out of the problem of communicable diseases is forcibly emphasized by the facts in this article. The influence of the school and community nurse in organizing similar prevention work in other communities cannot be overstressed. In three years Shorewood has reduced the number of cases of communicable diseases 500 *per cent. During the same period the population of the community increased* 60 *per cent. Surely these results merit emulation. The significant thing is not in the decrease of total number of cases of communicable diseases, but in the discovery of the fact that contagion does not travel (with rare exception) from house to house but through the schools. When it strikes Shorewood, it strikes a blind alley. Our contacts are made almost entirely by taking children "downtown" in the city of Milwaukee.*

W. C. Sieker, *Commissioner.*

Every city, town, village and hamlet in the country is engaged, actively or otherwise, in fighting contagious diseases and Shore-

wood, a fashionable little suburb of Milwaukee, is no exception. To Shorewood, as to other villages and towns, had come periodical visitations of whooping cough, influenza, measles, scarlet fever and other more or less serious communicable ailments—until one William Sieker, principal of the continuation school of Milwaukee, residing in the village, was appointed health officer.

This principal found, as every other observer has discovered, that the schools were the breeding grounds from which disease waves spread. No communicable disease can flourish without victims, and he felt that the only sensible policy was to refuse to supply school children for that purpose. According to the usual schedule one case of measles or whooping cough was promptly followed by another and then another. During his first year as health officer in that village there were reported a total of 219 cases of illness, classed as preventable by medical authorities. The new health officer was not proud of the showing. Indeed, he was so greatly chagrined that he set himself the task of trying to answer the question, Why? Why the spread of so many communicable diseases in this community? Among the causes which contributed were the following:

Some physicians failed to report cases of communicable diseases or were not prompt in doing so. Others sent the postcard notices to Milwaukee when they should have been sent to Shorewood. If physicians were not called in, parents invariably failed to report the cases. The most difficult situation was occasioned by the delay which ensued before a diagnosis. From one to six weeks often elapsed from the time the disease symptoms were first noticed until the physician would be willing to make a definite diagnosis. During this period the child who was coming down with a communicable ailment would attend school and freely mingle with other children. Cases which turned out to be measles were first diagnosed as "colds." Cases of diphtheria were first called "sore throat," then "tonsilitis," and until a diagnosis or diphtheria was announced there could be no official quarantine.

In the following year, before the schools opened, this health officer called a conference to which teachers, preachers, physi-

cians, village officials and others were invited. At this conference the whole situation was discussed and a new policy decided upon. It embraced the following salient features:

1. Isolating first and diagnosing afterward.

2. Placarding on suspicion.

3. Substituting, in large measure, educational propaganda for the exercising of police powers.

It was agreed upon that no child henceforth was to be permitted to remain in the schools if he had a cold, a cough, a sore throat, or was otherwise indisposed, no matter how mild the symptoms. Consideration for the comfort of the child itself should prompt such a course, and when one takes into account the potential mischief in its presence, failure to exclude becomes a reckless disregard for the rights of others. An excluded child was to be re-admitted only after it had been definitely determined by competent medical authority that its illness was not communicable. The burden of proof was shifted. The public interests were to be paramount, and those of the individual secondary. It was pointed out to the citizens that this policy was made necessary by reason of the fact that the medical profession had not yet advanced far enough to enable the most skilled within its ranks to differentiate between whooping cough, measles, diphtheria, scarlet fever, and other so-called children's diseases from an ordinary cough, sore throat, or a common cold when the first symptoms appeared, and that at the outset the diseases in question are already exceedingly contagious. "Isolation first and diagnosing afterward" was to be the invariable rule.

There is nothing strikingly new about the policy of isolation. Every village in the land has practiced it in a more or less haphazard fashion for years. The policy of radical exclusion of every suspected case was the chief factor in the new plan of prevention.

Mr. Sieker, in speaking of the results, has said: "Paradoxical as it may seem, school attendance has become more regular. During the past year not one child contracted whooping cough, diph-

theria, scarlet fever or any other common children's disease while attending the public school, and only one child managed to get into the parochial school carrying contagion with it. That one child created enough mischief to account for about one-fifth of the total reportable diseases for the year, and was directly responsible for the loss of approximately 800 half-days' attendance. The record for the preceding year was equally good.

"Shorewood takes the position that just as a worker in industry should be surrounded by every safeguard on the assumption that he has a right to as many fingers when he leaves the factory as when he went in, so have the children the right to come back from the school at night as well and free from infection as when they left their homes in the morning.

"The second point in the new program consisted in placarding houses on suspicion. When clinical symptoms were inconclusive, but circumstances warranted a suspicion, homes were placarded 'whooping cough suspected,' 'influenza suspected,' 'scarlet fever suspected,' as the case might be and the same quarantine regulations were maintained as though there were no question as to the diagnosis. Though quite a number of homes have been placarded on suspicion, the number of erroneous guesses has been negligible. The virtue of this expedient lies in the fact that erroneous guesses never result in injury to any one, while a 'correct' suspicion is often the means of preventing much needless suffering. Especially in dealing with whooping cough has placarding of suspicion been helpful.

"Next, the Shorewood Board of Health resolved upon a program of education. The way to correct the universal indifference of parents and the occasional neglect of the physicians in the matter of reporting communicable diseases is not by making a horrible example of some offender, saying or writing ugly things to him, or threatening, or bringing him before the bar of justice. Violations of the law and other regulations are usually not wilful. The offenders know no better. They need to be educated, and the most highly educated in the scholastic sense need the schooling

in matters pertaining to public health usually as much as those to whom we attribute a lesser degree of intelligence. Indeed, the latter are often much more teachable. They look upon the preaching of the health officer as the expression of a superior wisdom, and accept his conclusions and mandates with the credulity of a child.

"Through our educational propaganda we are trying to establish a sentiment, and have largely succeeded in doing so, of having it looked upon as a discredit, if not a disgrace, for contagion to travel to a second family. It is a most unusual thing to find two placards of the same kind in a neighborhood at the same time. The Shorewood mother is determined that so far as it lies within her power, if she should be so unfortunate as to have an afflicted child in her home, the contagion shall not travel to a second family.

"Faithful observance of the doctrine, 'Isolation first, and diagnosis afterward,' has borne good results. Two hundred and nineteen afflicted with communicable diseases was the record the first year. The following year the number dropped to twenty-three, and the year that closed August 31 brought a total of sixty-three. During the past year two accidents contributed one-third of the total; and the other two-thirds were infected by making contacts outside of our limits.

"When the official handbook, issued by the State Board of Health, declares that scarlet fever is communicable for probably six weeks, what could justify a layman in taking the position that the State Board is probably mistaken? I am happy to be able to report that most physicians, cognizant of a duty to the public as well as to their patients, invariably support the health officers. When in doubt, the public is given the benefit of the doubt. We would rather quarantine a week too long than a week too little. Probably due entirely to luck, but possibly due, in part at least, to the rigid enforcement of the regulation, we have been fortunate in having had no so-called 'return' cases during the past two and one-half years."

And now, so far as possible, Shorewood's policy is to become

a state policy. Recently a conference of all the health officers of the state was held. To it came physicians, nurses, welfare workers and health officers. The Shorewood policy was discussed and dissected. It stood the test.

If Shorewood, whose population ebbs and flows daily like a tide, can make such a record, what possibilities there are for communities free and far from the "maddening crowd's ignoble strife"! This is the way attending health officials viewed effective communicable disease control. Like many intricate problems its solution when found is simple. Thousands of pamphlets telling the story of Shorewood's health regime are now going to every community of the state and to every state health department of the nation.

WHERE TO GO FOR MONEY IN ORGANIZED WORK FOR THE SICK

Richards M. Bradley,
Boston, Mass.

The organized service which the general public requires in connection with sickness and maternity has of late years been found to cover more and more new fields of effort, and has been found to require for its satisfactory accomplishment an increasing amount of specialized work, often involving expensive building and equipment, and calling for a continually enlarging personnel of workers .

While from these causes there comes an imperative call for much new money, at the same time the old work is costing much more than ever before. Meanwhile the supporters of our hospital and nursing work find their funds reduced by high taxation and

business reaction, and are subjected to additional calls for assistance from all quarters of the world.

It is not to be wondered at that many old and tried institutions are finding it hard to carry on. Simultaneously with all this, an awakened public interest is finding itself deeply and fundamentally dissatisfied with much of this service as it has existed in the past, both because the service they have learned to want is sufficient and because of its charitable character. We, therefore, hear calls for state subsidies, state insurance, and public control of work that has hitherto been left to individual workers, or to self-perpetuating privately controlled philanthropic bodies. This dissatisfaction may be encouraged by demagogues and self-seekers, but it has a real basis in defects that are only too manifest.

A house to house convass of a cross section of the people taken almost anywhere in the country or city, showing what has actually happened to the people in sickness and maternity, will convince the most sceptical that there is a radical mal-adjustment between the people and the service that they should get, and that the machinery for getting the people to the service and the service to the people is not working satisfactorily.

Moreover, no one who has realized the honest repugnance felt by the ordinary plain citizen for the charitable or semi-charitable methods connected with much of the organized help available, can doubt the sincerity of those urging improvement.

We can sum up these complaints by saying that while technique is constantly being bettered and individual work in medicine, surgery and nursing is constantly improving, the application to the people of the knowledge and skill thus acquired is failing in efficiency. This state of affairs is bringing a call for various remedies that are probably worse than the disease, and before we drift further into perilous waters, may it not be well for us to ask ourselves whether this palpable failure of satisfactory accomplishment in what is one of the most important fields of human effort is due to the peculiar nature of the work or to our own present methods of trying to accomplish that work.

Why is it that the great and important industry of caring for

sickness and maternity should be in such a condition of unsatisfactory accomplishment, and of financial distress, that government operation and resort to the taxpayer should, to many persons, present an attractive short cut to better things?

Why should this be the case when not only are our public health officers fully occupied with the enlarged duties of their original field, but the public has just become pretty well convinced that in almost all other lines of human enterprise the extension of government effort is to be avoided wherever possible? Why is private enterprise in this particular field so inadequate, and so embarrassed financially, that increased government work is urged as a desirable alternative?

It is my conviction, after a long experience in trying to get things done by organized service for the sick, that this failure is not due to the peculiar nature of the service to be done, but to the peculiarly unsound way in which it is being done on its financial and business side. We have here what would be an absurdity were it not too often tragic in its results. We see a rich nation needing to have done a large amount of service, in connection with sickness and maternity. This work is perhaps the most important of all human services. It is a service that the nation evidently cannot afford not to have done; yet that service is being done in a most insufficient manner. We hear constant complaints that there is not enough money for it, while at the same time vastly greater amounts of money are being drawn from the pockets of the people for amusements, luxuries, and other things that are comparatively of little importance.

While technical efficiency in medicine, surgery and nursing is constantly increasing, we see for whole sections of the population the application of that improved service to actual cases becoming less and less efficient, while for other large portions of the people progress is fatally slow in getting the service to the cases, or the cases to the service. In this state of affairs we hear the call for two chief remedies, namely a more extended resort to the government and to the taxpayer, and greater contributions from the philanthropist.

It is my suggestion that for a large portion of this problem neither of these methods is the true way out, and that the true way out is what has proved the normal, ordinary, and effective way for nearly every other organized effort to serve the public's needs.

That way is to expect financial support from the consumer, or, in other words, to offer the person to be served the service that he needs in such a form that he can pay for it, and to require him to pay for it.

To use a common business expression, it is about time for us to undertake to *sell* the necessary organized service, nursing, hospital and otherwise, to the consumer, and not to somebody else, and to undertake to do this on sound business and financial lines suited to the needs and nature of emergency service.

The financial and business failure of our so-called system is not that of the professional workers in their own proper field, but of the business and financial men connected with this work who are failing to give it their business brains. It is a strange phenomenon that these men, in this connection, pursue methods that, as business and financial methods for accomplishing the purposes intended, are unworthy of comparison with the lowest standards of any other field of business effort.

It is true that of late years there has been some progress in accounting and in administrative economics, though there is room for much more, but this is not the fundamental trouble. That fundamental trouble has its origin in the fact that nursing and hospital work was originally organized to aid the pauper classes, and is still conducted with traditions and methods suited to the pauper and not to the people. These pauper classes were in former days regarded as a large and necessary part of every properly constituted community, and their existence, in the eyes of many good and devout people, was supposed to be called for by a sort of divine decree, declaring that poverty and dependence are a necessary factor in the production of benevolence.

The study of social science, and a more enlightened social and industrial system, has brought us to see that in this country, at least, this dependent class can be reduced to a comparatively small

proportion of the whole, and it is neither necessary nor desirable to make that class a determining factor in the organized service of the sick. Old ideas, however, die hard, and the idea still holds sway that in connection with this work we are justified in the unnecessary infliction of benevolence upon our fellow beings, which act I sincerely hope will sometime be promoted to its proper place among the deadly sins, since it is as bad morally as it is financially.

At the root of our inefficiency is this medieval idea that charity is a controlling factor in organized therapeutics, together with the idea that the service of the sick and suffering, or of the helpless mother and child is something so important and so appealing that the application of ordinary business method and common sense to its relief is a profanation.

I read only yesterday of some "big-hearted man" who had endowed a great specialized hospital where none but those unable to pay were to be admitted, as if disease and suffering were an exclusive possession of poverty, and as if his self-supporting fellow citizens had no need of highly organized service. The foundation provisions of some of our oldest hospitals are permeated with this same error, which has sapped their vitality and limited their usefulness to an untold extent. This provision of hospital and nursing service exclusively, or primarily, for the pauper has been modified nowadays into the "pay what you feel like" method, which is erroneously supposed to dispel the atmosphere of pauperization, but largely fails in extending needed service to the independent classes. Morally, it is rather worse than the exclusively charitable method, because it is not straightforward; financially, it is also a failure.

Now, what the ordinary citizen calls for is neither charity nor indulgence. What he needs and wants is a pay envelope or a salary check sufficient to meet his daily needs, with a sufficient margin for emergencies, and he needs to have his emergencies so financed that he can pay for them from that margin. He has full appreciation for the philanthropic endowment that makes possible the great school, university, or hospital, or nursing organization,

with a high standard of service open to the people on equal terms, but when he takes that service he wishes to go to the hospital, or to the nursing service station, as well as to the school, or to the university, with his head up, and on the basis of self-respecting equality with no favors asked.

What is it that is necessary in order to enable him to buy this service in this way? Simply the recognition that it is *emergency* service and that we must finance it accordingly on the benefit payment or insurance basis, as all such things must be financed if the ordinary consumer is to pay for them.

Disease and sickness are not expenses that come with regularity like taxes, rent and food. They strike here and there, but owing to the philanthropic fog that has clouded our financial intellects in this connection, we as a rule make no provision for that fact. If a salaried man or mechanic loses his house by fire and has no insurance, he is pitied for a fool by his neighbors, because they are educated to use fire insurance, but let him have two or three capital operations, or a severe epidemic in his family, and it is treated as an act of God, the probability of which apparently no human wisdom could possibly have foreseen. He must either partake of charity in some shape or suffer unassisted. There is no systematic effort to find out what it costs to give him this service and to offer him insurance against that cost. Yet such things are just as certain to occur as fire, and many of them are less preventable.

The way out for our own organized services, both nursing and hospital, if they would serve the whole people, is to put this emergency service of theirs into such shape that the people can pay for it; in other words to sell it to the consumers, in the form of benefit payments for hospital and nursing service. There is plenty of money in the country for repairing a broken down motor and there is good service for that purpose on nearly every corner, for the simple reason that those who furnish it are able to do so since they get themselves paid for it.

I respectfully suggest that the same principle be applied to broken down bodies, and that you get your trustees and committees to diminish the swelling of their philanthropic pride, and apply a small portion of their good business brains to getting more of your expenses paid by the consumer through benefit payments and proper financing for emergency work. Make them get to work and sell your hospitals, and your nursing, to your consumer in benefit payments. This is no pipe dream, it is done by the Metropolitan Insurance Co. for some of the needs of our very poorest—out of their pockets. It has been done for years in some countries by nursing benefit payments for associate members, that cut the ordinary fee in two for such members, at the expense, one of the founders told me, equal to a couple of dozen or so drinks per man. The same thing can be done here, and it can be done just as well for many other emergencies such as capital operations, with a still larger portion of the cost paid through benefit payments, for people don't indulge in capital operations, as they do in nursing, for the sake of mere comfort.

Don't let your trustees potter around trying to get a lot of elaborate statistics as a basis for benefit payments. Take a few hundred families and make up an offer of this emergency service that they will probably need, estimating its probable cost, as best you can, and make your trustees underwrite your guess. Get your system going and you will soon enough find where it comes out in practice. Don't worry if you don't get many buyers at first. Put your cost accountants at work and find out what is the reasonable cost of every piece of service you do and charge for it. Show what it will cost with benefit payments and without. Then if there is trouble, you will be able to show what your benefit payments can do.

This kind of dealing with Mr. Ordinary Citizen will be better for his soul, and he will respect and like you all the better for it. Your real dependents who cannot pay benefits should be financed from special funds treating dependence rather than disease, in a way distinct from the independents. Incidentally, you will find what are your parasite underpaid industries whose sick employees come on the public charge. There will still be plenty of scope for

your philanthropists in taking care of these dependents, if your benefactors are not interested in enabling high standard service to be given for all. Incidentally, in furnishing better service for all, you will be able to furnish better service even for the paupers. There is more money for your work in the pockets of the people than anywhere else. Go after it.

I am aware that in what I have said I am addressing a body of very busy people, whose greatest interest is in things that are not financial. As a class, you attend to financial things only when you have to, and you do it merely because you are not able to do your work from lack of money.

This sermon I have tried to preach, like many other sermons, is needed most by the people who are not in church. Therefore, I ask you to pass it on. It is needed by those important bodies—your trustees—who, as a class don't attend hospital meetings, but give their business brains to other things, and reserve their philanthropic emotions for their hospitals. What is more needed by the hospitals, and other organizations for the sick, is their business brains, and therefore I am presenting you with this short discourse as a testimony of a business man, to the effect that it is the business side of your proposition that is weak, and that it behooves you to get the business side of your hospital to sit up and pay attention to this subject.

You cannot, many of you, run hospitals and start a financial enterprise at the same time, but it is possible for you to get after the financial members of your board and present this testimony, to the effect that up to the present date their financial methods are not worthy of them, and because those methods are not up to ordinary business standards, their whole enterprise is threatened with failure.

Many of your trustees can *sell* almost anything to the people when they try, and they can sell them your hospitals, if they will take the time and trouble, for the goods in this case are worth more than the money they cost, and they have not even attempted to reach the real customer—the consumer. I take the liberty of advising you to tell them this and not to give them any peace until they really wake up and take hold of it.—(*Trained Nurse.*)

THE GENERAL PRACTITIONER AND THE SCHOOL MEDICAL SERVICE.

Certain of the local medical practitioners have been representing to the Swansea medical inspection committee that the school clinics are depriving them of their livelihood. One speaker of a deputation, appearing before the committee, said that most of the children attending the clinics could be transferred to private doctors without loss of efficiency, while another practitioner stated that it was now rare to see a child in a surgery. No one alleged that the clinics were not a success; in fact, it is the success of this public service that is the root of the trouble in Swansea.

Clinics and maternity centres have been popular from the moment of their inception, and the reason is not far to seek. These institutions supplied an urgent public need. The history of large business undertakings shows that those who cater courteously for what the public wants, and offer a good article at a reasonable price, are likely to have many customers. School clinics were not set up by education committees until careful and prolonged consideration had been given to the subject. Among the various aspects of the problem there was always one of crucial importance—medical inspection of children attending the public elementary schools revealed a mass of disease and defect, for which treatment was not forthcoming at the hands of existing agencies. Major and minor ailments were referred to the family doctor, the family dentist and the family hospital, but for various reasons only a small percentage of the defects were remedied. So far as the family doctor figured in this unfortunate impasse, it was plain that many practitioners would not be bothered with the regular daily treatment necessary for conditions such as discharging ears and sore eye-lids. In the few instances where the family doctor had the time and the accommodation necessary for the work, the fees charged, even though as low as eighteen pence for each attendance, were in the aggregate beyond the means of the average working-class home. As soon as the clinics were established the practitioners themselves were among the first to

send these irksome cases there for treatment, and it was only when the family doctor saw the success of the scheme that opposition began to arise in some areas.

As a matter of fact medical inspection of school children has brought much grist to the mill of the family doctor. Innumerable defects which, but for medical inspection, would have remained undiscovered, have been brought to light and referred to practitioners for treatment—for adequate payment. One member of the Swansea committee said clinics were the finest innovation of recent years, and we agree with him. It is not only the children of the very poor who benefit. There is abundant evidence that the more prosperous parents are impressed by the striking results obtained by the proper and early treatment of minor ailments, and that on their own initiative they are taking their children to private practitioners even before they come under the notice of the school medical officer.—*Exchange.*

HOME DISINFECTION IN PULMONARY TUBERCULOSIS

By E. L. DOVE, M.B.,

RESEARCH WORKER IN THE HYGIENE DEPARTMENT OF UNIVERSITY COLLEGE, LONDON.

The object of the following experiments was to indicate the simplest, cheapest, and most available means of countering the risks incurred when a sufferer from consumption shares living and sleeping rooms with others. It is doubtless the poor who run the greatest risk, more particularly because of their crowded circumstances and the greater difficulties they experience in adopting the necessary precautions; to them efficient chemical disinfectants are prohibitive in cost, and when distributed gratuitously by the local sanitary authority they are generally employed in a manner which gives but little security.

In the selection of measures to meet their needs regard must be

had to the fact that, mainly owing to the increasing use of gas stoves, there is often no open fire (for at least many months of the year) for burning sputum, infected dust, paper handkerchiefs, etc. Therefore the advice he offered is based on the use of hot water, and the aim has been to define how this agent may be simply and effectively employed.

Floors.—Pieces of board were scrubbed and thoroughly disinfected and dried. They were then smeared with a thin layer of sputum containing tubercle bacilli. This was covered and allowed to dry, and on the following day one piece was scrubbed with hot water (*as hot as could be borne*) and yellow soap in the proportion usually employed in washing floor. This piece was then covered and allowed to dry, after which washings and scrapings of the infected surface into sterilized water were inoculated into guinea-pigs. Two out of three experiments gave negative results, the non-scrubbed board giving positive results in each case. The conditions of experiment were those of very gross contamination, far in excess of what would occur in actual practice; and so it may be assumed that the process of good scrubbing with hot water and yellow soap will suffice in actual practice.

Experiments were made to ascertain whether soap in the proportion usually employed for scrubbing floors has any disinfectant value, since soap itself is practically sterile. The test organism employed was *Staphylococcus epidermidis* Welch, and the soapy water used was at a temperature (140°F.) well below the thermal death point of the organism. The results indicated that the soap had only a very slight effect, and that its only material value is the aid it renders in the collection and removal of dirt (with associated organisms) from infected surfaces.

Handkerchiefs, Pillow-slips, etc.—The ordinary staphylococcus of the skin (S. *epidermidis* Welch) obtained by rubbing a little broth on the skin of the hands and distributing a loopful of this over agar slopes was employed as a preliminary test organism. A pure culture was obtained on agar slopes, and it was found that the growths were killed by exposure for twenty minutes to a temperature of 75°C. in the form of moist heat; whereas the tubercle

bacillus is destroyed at 70°C. in the same time. This staphylococcus is a more convenient germ to employ in preliminary experiments than the tubercle bacillus, the thermal death point of both organisms being about the same and the former germ being easy to cultivate.

Tuberculous sputum was sterilized by steaming for twenty minutes, and inoculated with growths of the staphylococcus. Sterilized strips of linen were soaked in this, then placed in cold sterilized water and gradually brought to the boiling point. Directly the water boiled the strips were removed and cultures made from the drops of fluid pressed out of them. In four sets of experiments there were no growths, while the control slips in every case furnished growths.

Boiling water was removed from the gas, and similarly inoculated strips of linen were immediately immersed and left for half an hour in the very hot water; they were then removed and efforts made to cultivate the germ. Again in four cases there were no growths on the strips so exposed, while all the control strips immersed in warm water furnished growths.

One pint of tap water was boiled and at once poured into a cold sterilized quart basin. Four strips of sterilized linen soaked in sterilized sputum which had subsequently been inoculated with the staphylococcus were immersed in the water and left there for fifteen minutes. The strips were then removed, and in no case was it possible to obtain growth from the water pressed out of the linen strip. The temperature to which the slips were exposed was at the commencement 90° to 92.5°C., and at the end 63° to 67° C. Control slips placed in warm water (50° to 60° C.) gave positive results.

Similar experiments were made with the basin filled with sterilized handkerchiefs and inoculated strips placed between them, the aim being to deal with as many handkerchiefs as practicable, provided they were just covered by a layer of water. After fifteen minutes the slips were removed and agar slopes inoculated with

the water pressed from them. Controls in warm water gave positive results; but seven out of eight were negative from the slips exposed to a commencing temperature of 86° to 88° C., and an end temperature of 62° to 65° C.

For confirmatory purposes the last experiment was repeated with sputum considerably infected with tubercle bacilli. After twenty minutes the strips were removed and the material from them filtered and inoculated into guinea-pigs. In the control strips only warm water was employed. Two months after inoculation the three control guinea-pigs had enlarged caseating glands on the side of inoculation; both by *post mortem* and microscopial examination the infection was shown to be due to the tubercle bacillus. The nine guinea-pigs which had been inoculated from the strips exposed to early boiling water were healthy, except one, which had an enlarged femoral gland on the side of inoculation.

I desire to acknowledge my indebtedness to Professor H. R. Kenwood for valuable advice and assistance in connection with the foregoing experimental work and the statement in which I have embodied it.

NELSON'S MEDICAL LIFE HISTORY

Nelson was one of those who, notwithstanding bodily infirmity, have writ their names large on the page of history. Like William III., whose life was a long disease, the strength and ardour of Nelson's spirit never failed to support his weakly frame whenever special effort was called for. The "little great man," as he was affectionately called by his friends, would have been rejected if he had offered himself as a candidate for the navy at the present day. His admission was due to the influence of his maternal uncle, Captain Maurice Suckling. But so poorly did that officer think of his nephew's fitness for the service that when reminded of his promise to take care of him he answered: "What has poor Horatio done who is so weak that he, above all the rest, should be sent to rough it out at sea? But let him come, and the first time we go into action a

cannon ball may knock off his head, and provide for him at once." The high-spirited boy did not suffer this discouraging opinion to baulk him of his desire, and at the age of 12 cheerfully faced life in the navy, where the hardships at that time were trying to all but the strongest. Quite early in his career his health was broken by a long period of service in the East Indies, and he had to be sent home. In the West Indies, in 1780, he had so severe an attack of dysentery that on his arrival at Port Royal he had to be carried ashore in his cot, and he returned to England in such a condition that the act of moving him to and from his bed caused acute pain. While still suffering from the effects of the West Indian climate he was sent to the North Sea, where he was kept a whole winter. At the siege of Calvi in Corsica, where Southey says the climate proved more destructive than the service, all the prevailing disorders attacked him, but, according to his own theory, he had not strength enough for them to fasten on. At Calvi gravel was driven into his right eye by a shot which struck the ground near him. He made light of the injury, but he lost the sight of the eye, and the vision of the other one was so much impaired that for the rest of his life he wore a green shade over his forehead to protect the left eye from the effects of strong light. It is thought probable that if he had lived a few years longer he would have become completely blind. In the attack on Teneriffe Nelson was shot through the right elbow in the act of landing. He refused all help in getting aboard his flagship, except a rope thrown over the side. This he twisted round his left hand, saying: "Let me alone; I have yet my legs left and one arm. Tell the surgeon to make haste and get his instruments. I know I must lose my right arm, so the sooner it is off the better." The amputation was followed by a great deal of pain; the ligature, which was of silk, caused much irritation and discharge, and there was scarcely an intermission of pain, night or day, for three months after his return to England, and he was driven to take laudanum to induce sleep. A curious example of the all-embracing power of red tape, even in the case of one who had done the State such service, is afforded by the way in which Nelson was treated by the clerical officials at the Admiralty in the matter of his wounds. Not having been in England since he had lost his eye he

went to the Admiralty to receive a year's pay as "smart money," but could not extract the money from the clerk because he had neglected to bring a certificate from a surgeon that the sight was really destroyed. Naturally vexed that this formality should not have been waived when, as he thought, the fact was sufficiently notorious, he procured at the same time a certificate for the loss of his arm. When he went again to the office the clerk, finding that the amount claimed was only the annual pay of a captain, said he thought it had been more. "Oh," replied Nelson, "this is only for an eye. In a few days I shall come for an arm, and in a little time longer, God knows, probably for a leg." At the battle of the Nile he was severely wounded on the head by a piece of ranging shot. A large flap of skin was torn from the forehead and hung over the eye with which he could still see, totally blinding him. At the approach of middle life Nelson suffered from gout, but he overcame the tendency to this disease by abstinence from animal food, wine and ferminted drink for nearly two years, restricting his diet to vegetables and milk and water. His health had suffered grievously in the Mediterranean; in describing his complaint he said, "It is as if a girth were buckled taut over my breast; and my endeavour in the night is to get it loose." After the battle of St. Vincent he felt the imperative need of rest, but as soon as he recovered sufficiently to resume duty he had to undertake work which entailed intense anxiety. The unrelaxed strain of his watch at Toulon, which lasted from May, 1803, till August, 1805, and his subsequent long pursuit of the enemy combined with the after-effects of his wound, brought him to the verge of exhaustion. On his way back to Italy he was attacked by fever, and for eighteen hours his life was despaired of. His health was so broken that he thought he could last only till after the decisive battle he felt to be impending. He was afraid of blindness, and though he was only 47, described his "shattered carcass" as in the worst plight of any in the fleet. At Trafalgar came the end. In the thick of the fight he was struck in the left shoulder by a ball fired from the mizzen top of an enemy ship at a distance of not more than fifteen yards from the part of the deck where he was standing. The ball penetrated the chest and lodged in the spine. The immediate cause of death was haemorrhage in the cav-

ity of the thorax from a wound of the left pulmonary artery. The account of his death given by Southey in his *Life* is supplemented in medical details by Dr. William Beatty, who ministered to the hero in his last moments, in his *Authentic Narrative*, published in 1807, and reprinted by Archibald Constable and Co. in 1895. Beatty thought that in spite of occasional illnesses Nelson might have survived to a great age but for the fatal shot from the *Redoubtable*.

The Physicians' Library

or

Book Reviews

Operative Surgery for Students and Practitioners, by JOHN J. MCGRATH, M.D., F.A.C.S., Professor of Surgery, Fordham University; Consulting Surgeon to the People's Hospital; Visiting Surgeon to the Columbus, Fordham and New York Foundling Hospitals, etc., etc. Sixth revised edition, with 369 illustrations, including full-page color and half-tone. Philadelphia: The F. A. Davis Company, publishers. 1921. Price $8.00 net.

In this work the author describes the various regions of the body under the headings of surgical anatomy and operations. The anatomical descriptions are excellent although they might be made more graphic by omitting some of the unessential details. Their reading would be a useful review for the student, but not very valuable to the surgeon about to perform an operation. Most of the type operations are well described as they are performed by the author. Some of those which are practically obsolete might well be omitted and be replaced by some recently devised ones. The inclusion of the indications for operation and of more surgical pathology would add greatly to the use of such a book.

General Pathology—An introduction to the study of medicine, being a discussion of the development and nature of processes of disease, by HORST OERTEL, Strathcona Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University, and of the Royal Victoria Hospital, Montreal, Canada. New York: Paul B. Hoeber, 1921. Price $5.00.

The production of a successful work upon a scientific subject demands of the author a profound knowledge of his subject. The

mental capacity to visualize it from the position of those less well informed and the clarity of thought to present in clear and concise language, what he and other workers in the same field have learned from carefully recorded observation and research. The present work on general pathology by Ortel possesses in a large measure the above points of merit and it is not undue praise to bespeak for it a wide circle of friends.

The author has very clearly developed the thought that in the study of disease, existing conditions must be approached within the frame of Modern Biology; and that we must interpret our observations in the light of expressions of Physico-Chemical Laws. That the historic development shows how one step of thought influences the next and thereby enables us to arrive at a proper valuation of current ideas; that the vizualization of possible pathological occurrences (approached from their anatomic histological development leads to a clearer understanding of disease.

The author has achieved a distinct advance in the presentation of the subject of general Pathology, and in all fairness we must say that he has given the medical profession, a work worthy of rank with those of some of his notable predecessors in the same field of scientific research.

Medical Record Visiting List or Physicians' Diary for 1922 *Revised.* New York. WILLIAM WOOD & COMPANY, Medical Publishers.

Every doctor would find this little pocket book handy and serviceable. To put down the visit, the charge and a catchword or two as to diagnosis and treatment will take only a few moments at the house and helps out the memory when making entries in the larger books at bedtime. Then there are the calendar, the pregnancy table, the dosage table, the contagious disease dragnostic table, the treatment of poisons, hints on writing wills, record of vaccinations, table of signs, etc.

Fasting and Man's Correct Diet, by R. B. PEARSON, Construction Engineer, Certified Member American Association of Engineers, Chicago, Ill., published by the author.

Pearson believes in eating to live, instead of living to eat. He is an advocate of the simple life and simple diet. Therein he is in agreement with Hinbede, the emminent Dane, through whose advice, during the Great War, the Danes went on potatoes and buttermilk, and lowered their morbidity and mortality very much. Pearson states that he cured himself from catarrh (mucous colitis, we guess), by a prolonged fast—no seven day affair. He advocates fasting until true hunger supervenes. Many people nowadays are never hungry—always satiated. These would do well to follow Pearson to the needed extent. Pearson is an anti-vaccinationist; but as to this we have dealt anteriorly. We would like to see him contract smallpox as one did, an anti-vaccination Toronto alderman; so that, perchance he might change his point of view.

Food Products—Their Source, Chemistry and use by E. H. S. BAILEY, Ph. D., Professor of Chemistry and Director Chemical Laboratories, University of Kansas. Second revised edition, with 92 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price $2.50 net.

This is a most interesting and useful little volume giving an account of the source, composition and use of nearly all foods. To quote the preface "The general principles of food production, manufacture and preparation are discussed in such a way that the reader may have a practical knowledge as to what constitutes a good food and where it may be obtained."

It is written to serve as a text book for students of food in universities and high schools, but it will be found a most useful addition to the library of the internist. It is not a book on dietetics, but it contains much useful information about the source and manufacture of foods that are not found in works on diet.—G. S. S.

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CONTENTS

EDITORIAL

	PAGE
With the Years	49
J. Algernon Temple	51
The Business End	53
Colds in the Head	55
The O.T.A.	58

ORIGINAL CONTRIBUTION

	PAGE
The Early History of Public Health in Ontario. J. W. S. McCullough M.D.	60
Obituary	85
A Timely Warning	86
Book Reviews	89

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Editorials

WITH THE YEARS

We take it for granted that *Confessio Medici* is a familiar book to medical men of whatever age and ranking, and that its golden philosophy has yielded rich harvest to every one of us.

But because time and care blur first memories and impressions it would be a desirable thing to occasionally renew our acquaintance with its pages —and no season is more timely than when entering upon a new year.

Strong yet tender, merry yet weighted with profound wisdom, the finer ethics of our profession there set forth grow luminous and spiritual to visions too frequently dulled by the familiarity that breeds indifference, if not contempt.

The earlier chapters of this most companionable little volume are studded with shining nuggets of

wisdom hewn from the quartz of personal experience. Only a doctor who has practised and puzzled, laughed and saddened and philosophized, could write such profound truths in such witty words.

"In medicine, many of us are glad that we have a calling, but doubtful whether we have a call."

"A young man must be careful not to reckon a successful father among his assets, but his liabilities. For he who enters his father's profession counting on his father's name enters at his peril."

"An interne should have reverence, a liking for work and a certain simplicity and directness of thought."

"At present psychology is in the condition of physics before Galileo."

"Six pennyworth of drugs to get at his brain, and six months' spiritual treatment to get at him:— That is the way of practice."

Thus gaily the author administers his pellets.

Then come those magnificent later chapters, "Retirement," "The Very End," a wonderful professional threnody, whose notes ring with bell-like clearness through the mists that gather about our advancing years of practice.

Let us read *Confessio Medici* each year and gird ourselves afresh.

J. Algernon Temple

The Victorian era possessed a class of physicians of a stamp not much in evidence nowadays. A portrait of one of this class was unveiled in the Toronto Academy of Medicine recently—a striking likeness of the subject of this sketch, Dr. J. A. Temple. Scores of his old students and their wives were present to do honor to their old professor, who must have felt gratified at their warmth and cordiality. One of these old students who had come a long distance remarked as he left the gathering that there ought to be more of such tributes to these older medical worthies.

The picture stands out distinctively, as does the man whom it portrays. At first sight of Dr. Temple one is struck with his personality—a fine upstanding figure, of soldierly bearing and immaculately dressed. He has a strong face with well cut features, and on observant eye. His voice is pleasant and cultivated. He looks a man of courage and resource. He inspires confidence—a fine quality in handling sick folk and their relatives.

As a freshman, the writer well remembers being invited by a final student at Trinity to go over to hear Dr. Temple lecture. The subject was "Puerperal Eclampsia." The students of those days were a rollicking lot and at times would take liberties with an occasional professor. Not so at Dr. Temple's lecture. They came in, took their seats and listened most attentively to the lecturer whose

opening and closing sentences began with the word "Gentlemen," uttered in such a way that they felt impelled to play the part assigned them. No request was made for order, no threat—a simple taking-for granted.

The writer had the good fortune to be one of Dr. Temple's house surgeons in the early nineties in the old T.G.H. And he discovered that this man, whom his admiration had placed on a somewhat cool, reserved and aloof pedestal, was the soul of gentleness and kindness to his medical assistants and to his nurses and to his patients, especially those who were poor and in need of a world of comfort or advice.

Dr. Temple belonged to a small coterie of medical seniors who quarterly used to meet at one another's homes for dinner and an evening together. At these dinners one noted another aspect of his character. Here among intimates all professionalism was discarded, all cares forgotten; and in their place an affectionate camaraderie. The hospitality given and received was that of brothers. One after another most of these old companions have passed on. But a small moiety remain, Dr. Temple among the number. No member of our profession is more honored by his associates. Physician and gentleman—lad of high degree, Dr. Temple is an exemplar to the oncoming generation of practitioners.

The old beloved quotation is not too trite to apply to him:

> "As some tall cliff that lifts its awful form,
> Swells from the vale and midway leaves the storm;
> Though round its brow the rolling clouds are spread,
> Eternal sunshine settles on its head."

The Business End

What with baby welfare clinics, examination and treatment of school children and employes in industry, venereal clinics, public wards in hospitals wherein patients receive free treatments, sanatoriums for the tuberculous, lodge work, central practice, group practice, the ordinary practitioner "on his own" is having a struggle for his bread and butter. Then, too, quite a portion of his practice is unremunerative; the needy poor cannot pay. Others can pay only in part; leaving only another moiety who do give a *quid pro quo* for services rendered.

What is to be done?

First, the general practitioner in such circumstances must keep himself well equipped and well informed—ready to give careful study to his patients and to administer the proper treatment *secundem artem.* He should give careful attention to each and every patient, regardless of expected emoluments, with serious cheerfulness and cheerful seriousness.

His work thus performed he has the approval of a good conscience and should then, in his own and in his family's interest, render an account commensurate with the service rendered. Of course, the financial circumstances of the family treated must

be considered. We fear many practitioners are too lenient in their charges and are not benevolently insistent enough in demanding prompt payments. It is time the doctor was treated as the butcher, the baker and the candlestick maker are, i.e., by being paid as soon as the goods are delivered or within 30 days.

Some successful medical man should read a paper on this subject at the next Dominion and Ontario Medical Associations.

Colds in the Head

Fred Stoker discusses his subject in a recent issue of the *Practitioner* (English). This includes—from the patient's point of view—any acute discharge from the nose. With one exception this discharge is due to organismal infection. A contributory factor—often of immense importance—is a lowered local or general resistance. The nose and its neighborhood are favorite spots for harborage of germs, and of unsuspected pus. Infected sinuses, the maxillary antra and ethmoid cells are common offenders, and are frequently without indicative symptoms. Such infections should always be looked for in acute rhinitis. With cacosmia, purulent discharge, transillumination contrast, and pus in the upper two-thirds of the nose, the elucidation is simple; not so when these are absent. A soldier who had suffered from frequent and severe colds in the head showed, in the intervals, no running or pus in either nose or naso-pharynx; and transillumination and radiography were negative. During a cold there was more pus from the left nostril than from the right. Puncture and irrigation of the left autrum ejected two drams of thick, clotted pus. Operation cured the colds. A second case, thought to have been due to adenoid trouble, recurred after removal of the adenoids. Subsequent examination—when the colds appeared—revealed a tiny half-dried crust under the right middle turbinal sterinly. Transillu-

mination as before showed the autra and frontal sinuses clear; but the naso-pharyngeal discharge pointed to the cause—muco-pus in the right autrum.

If the cause is ethmoid, one finds enlargement of the middle turbinal and the bulla ethmoidalis, and if the condition has lasted for some time polypi will be found in the middle meatus.

In chronic frontal sinusitis the discharge is usually constant. Sphenoidal suppuration is not a common cause of recurrent rhinitis unless associated with ethmoidal disease. In uncomplicated cases of sphenoiditis the usual complaints are a discharge in the back of the throat, a "sore-dryness" in the same position and headache.

In childhood the most frequent cause of recurrent colds is adenoids, particularly if chronically inflamed.

Chronically infected tonsils may also be the cause of acute recurrent catarrh. Patients often describe the attacks as "always flying to the throat"; they should say "from the throat."

These diseased tonsils may be quite hidden in the fossael. Firm stroking movements by the index finger over the anterior pillar in a vertical manner may detect an abnormal hardness; and if the pillar is retracted forwards and outwards, a foul smelling material is seen to be squeezed out of the tonsillar crypts, reeking with nuero-organisms. Likely the

same organisms will be found in the nose. Pyorrhœa alreolaris may also be a cause of colds. Any type of nasal obstruction will predispose to the disease.

Apart from these organismal infections one may develop spasmodic rhinitis, indicated by a "bunged-up nose," which runs like a tap; head like to burst, sneezing, and a general "done to the world" feeling—a disease akin to asthma. It may clear up in a few minutes or hours.

The O. T. A.

In this issue we publish a letter which appeared in the *Globe* prior to the Christmas holidays—about the date the old-timers were wont to call for crocks.

Very much more liquor has been prescribed by physicians for their patients since the O.T.A. came into force than before. But as time goes on the amount is diminishing, due to the chastening administered to those of the profession who prescribe with too lavish a hand.

In the larger places where dispensaries and drug stores flourish few crocks really need to be prescribed. In places remote from these dispensing stations the quart or more is often needed.

The present arrangement is not satisfactory; but as time goes on new schemes will be worked out to handle the evil of intemperance.

Meantime it behooves medical men to prescribe with caution. Too often are they beseeched for a "script"—perhaps more often than they order it otherwise.

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Perry G. Goldsmith, C.B.E., M.D., Senior Assistant, Ear, Nose and Throat Department, Toronto General Hospital. **J. K. Milne Dickie, M.D., F.R.C.S., Edin., Ottawa.**

PEDIATRICS:
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MENTAL AND NERVOUS DISEASES:
N. H. Beemer, M.D., Medical Superintendent, Ontario Hospital, Mimico; **C. K. Clarke, M.D.,** Medical Director The Canadian National Committee for Mental Hygiene; **Campbell Meyers, M.D., M.R.C.S., L.R.C.P. Eng.**

GYNECOLOGY AND OBSTETRICS:
B. P. Watson, M.D., F.R.C.S., Edin., Professor of Gynecology and Obstetrics, University of Toronto; **J. Gordon Gallie, B.A., M.D.,** Assistant, Department of Obstetrics and Gynecology, Toronto General Hospital.

PATHOLOGY:
J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, University of Toronto; **J. G. Fitzgerald, M.B.,** Professor of Hygiene, University of Toronto, Director Connaught Antitoxin Laboratory; **H. K. Detweiler, M.B.,** Department of Pathology, University of Toronto; **S. J. Streight, M.D.,** Toronto.

OPHTHALMOLOGY:
J. M. MacCallum, M.D., Chief, Department of Ophthalmology, Toronto General Hospital; **Walter W. Wright, M.B.,** Assistant in Ophthalmology, Toronto General Hospital.

DERMATOLOGY:
D. King Smith, M.B., Clinician, Department of Dermatology, University of Toronto.

UROLOGY:
Robin Pearse, F.R.C.S., Eng., L.R.C.P., Lond., Assistant Department of Urology University of Toronto and Toronto General Hospital.

MANAGING EDITOR:
W. A. Young, M.D., L.R.C.P., Eng., Toronto.

Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

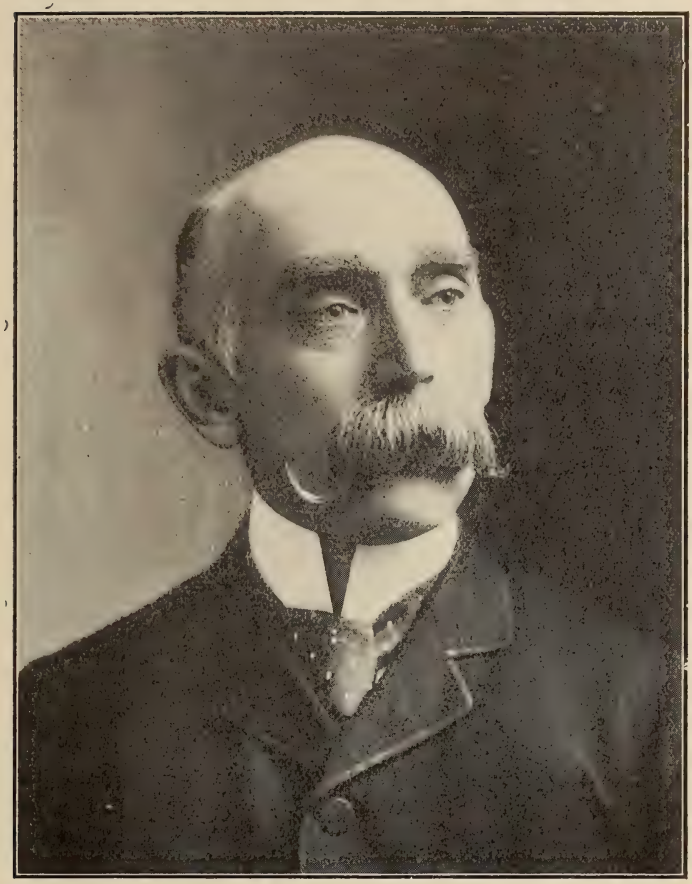
EARLY HISTORY OF PUBLIC HEALTH IN UPPER AND LOWER CANADA.

By J. W. S. McCULLOUGH, M.D., Chief Officer of Health, Province of Ontario

The earliest evidence of the recognition of Public Health in Canada was the enactment of the Quarantine Act in 1794.

The epidemic of cholera (1832-4) stimulated the Legislature of Upper Canada to action, and an Act to establish Boards of Health was passed by that body. From this time to 1848 there was little or no activity in respect to public health matters. (The Provinces of Upper and Lower Canada were united in 1840). There was a typhus epidemic in Canada in the years 1845-47, and of cholera in 1849, and again in 1854-5. It will be of interest in passing to note that in 1847 immigrants to the number of 98,106 passed through the port of Quebec. Of these 8,691 were admitted to Grosse Ile Hospital. Three thousand two hundred and twenty-six of these and two thousand one hundred and ninety-eight others on ships in quarantine died of typhus fever, and are buried at Grosse Ile. The outbreak of cholera was doubtless the reason for the enactment establishing "A Central Board of Health" in 1849. The public mind remained undisturbed in respect to public health until 1866, when the outbreak of cholera in that year induced the Government to enact new regulations looking to the control of the disease. Confederation of the provinces of Canada occurred in 1867, and in 1873 a Public Health Act passed in Ontario permitted the appointment of members of municipal councils and trustees of police villages to act as health officials (Local Health Committees). These were the forerunners of the present local boards of health.

Apparently our forefathers (something like ourselves) needed an epidemic of some sort to create interest in health matters. There was a severe outbreak of yellow fever in the United States in 1877. In the following year a select committee of the Legislature of Ontario was appointed to consider the report



Peter Henderson Bryce, M.A., M.B., L.R.C.P. & S. Edin.,
1st Secretary, Chief Officer of Health and Deputy Registrar-General, 1882-1904.

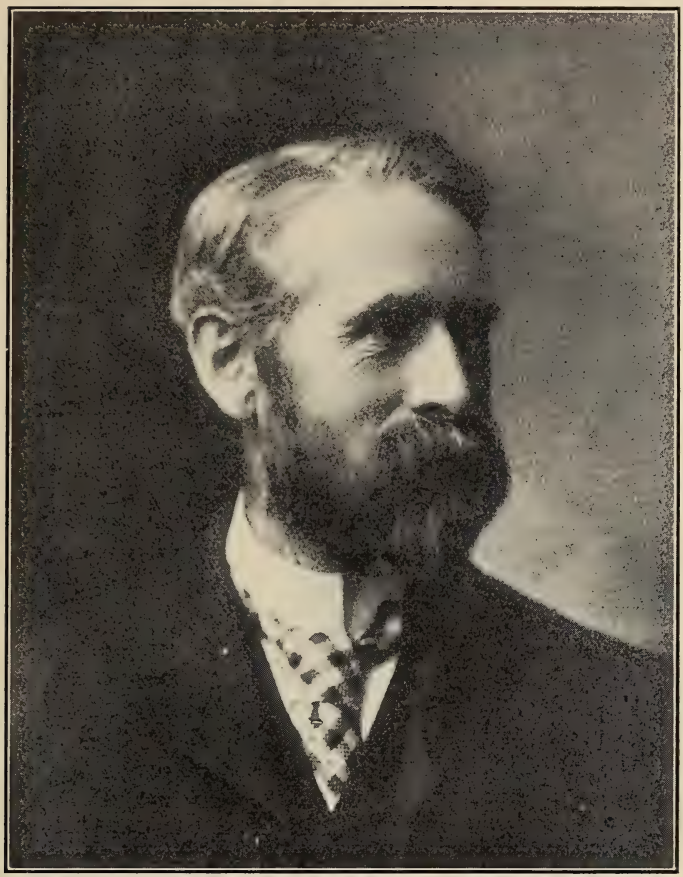
"on the subject of sanitary measures for maintaining and promoting the public health." This committee having reported, agitation became quite general about 1881 for the creation of some permanent central health organization in Ontario. Various commissions were appointed. These reported favourably, and in 1882 the Provincial Board of Health was established under the authority of 45 Victoria, Chap. 29, R.S.O. A permanent secretary in the person of Dr. Peter H. Bryce was appointed. He continued in office until the year 1904, when he resigned to become Chief Medical Inspector to the Department of the Interior and Indian Affairs at Ottawa.

It will be remembered that the enactment of 1873 permitted the appointment of local health committees, but up to 1882 only fifty of these committees have been appointed.

The first meeting of the Provincial Board of Health was held in Toronto *on May 9th, 1882.* The first chairman was Dr. Wm. Oldright, and the other members were Dr. C. W. Covernton, Dr. J. Hall, Dr. J. J. Cassidy, Dr. F. Rae, Dr. H. P. Yeomans, and Dr. P. H. Bryce, Secretary.

The first annual report was published in 1882-3. From the earliest days the reports of the Board are filled with interesting material showing that the members of the Board were fully alive to their duties. In November, 1882, Principal John Galbraith, C.E., of the School of Applied Science, was appointed to succeed Dr. J. Hall, who had resigned. Of the early members of the Board the sole survivor is Dr. Peter H. Bryce.

The Premier of the day, Mr. (afterwards Sir) Oliver Mowat, speaking to Dr. Bryce (the first Secretary of the Provincial Board) said: "We have passed this health legislation but have little knowledge of just what there is to do, or of its extent, but in any case, Dr. Bryce, its success will wholly depend upon your energies." These words were spoken thirty-eight years ago, and as Dr. Bryce says: "The comparison of the grant of $4,000 in 1882 for the payment of the half-time Secretary of the Board and for travelling and other expenses with the half million or more voted in 1920, will serve to illustrate the evolution of Public Health as a part of the social activities of a progressive modern community."

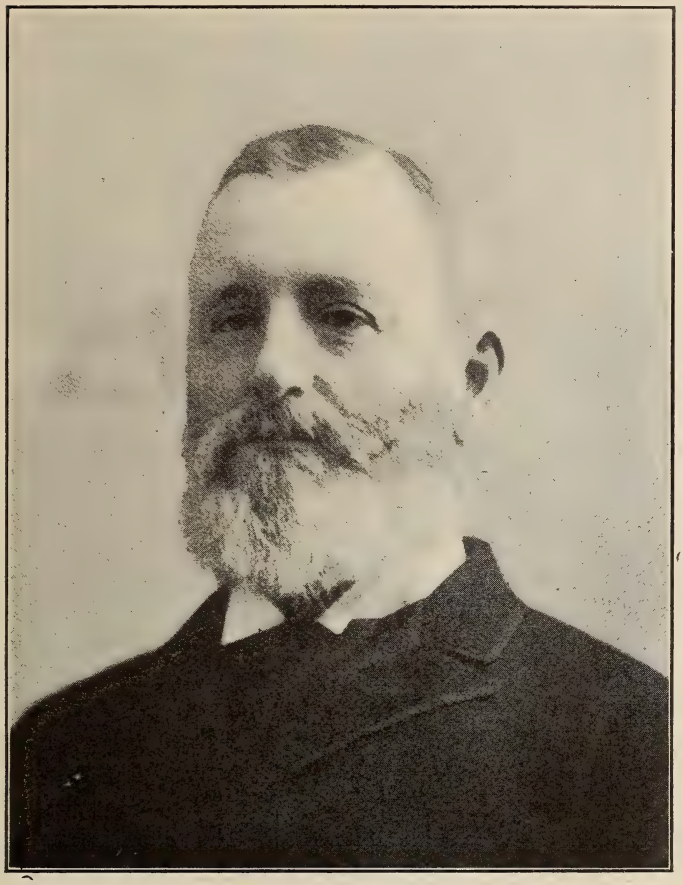


William Oldright, A.B., M.B.,
1st Chairman, 1882-1884.

The original Act passed in 1882 had in addition to the establishment of the Board the following objects:—

(1) Collection and dissemination of sanitary information.
(2) Health legislation.
(3) Investigation of the causes of diseases.
(4) Dealing with outbreaks of disease.
(5) Dealing with food and drink supplies.
(6) Concerning school hygiene.
(7) Sanitary Supervision of Public Institutions.

It needed considerable courage to enact what were considered drastic health laws in those days, and it was with some misgivings, and undoubtedly acting under the advice and pressure of the energetic Secretary and his Board that the Premier of the day introduced and passed in 1884 the Public Health Act, which with succeeding amendments is the basis of the excellent Health Code existent at the present time. The Public Health laws of Ontario, like most of our laws, are founded on those of England, and we who are concerned with public health work at the present time have reason to be grateful for the wisdom and courage of our predecessors. These laws are also the basis of much of the Public Health law of the other provinces of Canada. There is, perhaps, no public health law in America any more concise and satisfactory than that of Ontario. The value of the Act was submitted to an early test in an outbreak of smallpox which occurred in the autumn of 1884 in the Township of Hungerford. There were 204 cases with 33 per cent. of deaths. Dr. Bryce took charge of matters and succeeded in having over 4,000 of the population vaccinated. By this means the epidemic was promptly checked. The powers of the Act were enlarged from time to time: in 1885 to allow the Board to deal more effectively with contagious diseases, in 1886 for the expropriation of land for isolation hospitals, and in 1887 for notification of Public School teachers in cases of contagious diseases. In the same year provision was made for inspection of slaughter houses and of dairy and ice supplies. The position of Chief Officer of Health, including that of Secretary of the Board, was created in this year. In 1889 Stipendiary Magistrates were made Health Officers for the unorganized districts, and still hold this office. In 1900 the Act to establish County Sanatoria was passed, providing for assistance in the cost of building and for a per capita grant in the maintenance of patients. The effect of this legislation upon the mortality of tuberculosis in Ontario is dealt with elsewhere in this review. In 1892 the Registration of Births, Marriages and



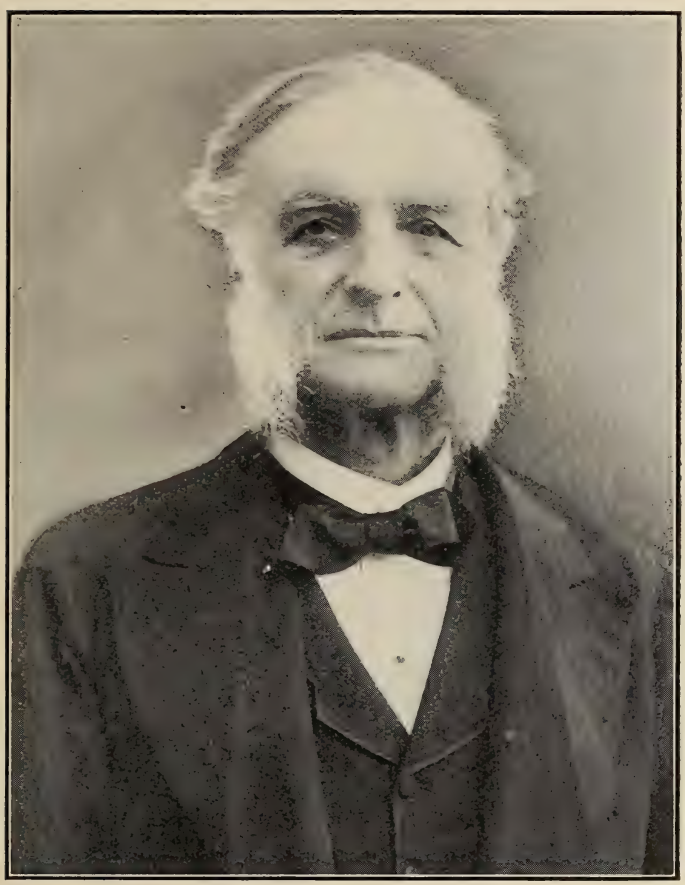
Francis Rae, M.D.,
Chairman, 1887-1890.

Deaths was placed under the control of the Secretary of the Provincial Board, who became Deputy Registrar-General.

The year 1890 was prolific in important additions to the Act; such, for example, as inspection of meat and milk, and of animals suffering from contagious disease. In this year provision was made whereby County Health Officers might be appointed. This enactment failed to enlist the encouragement it deserved. This may have been due to hesitation on the part of the County Councils to incur the expense hitherto and still borne by the municipalities. Another reason may have been the large size of our counties. Greater results might possibly have been attained if the Government had been wise enough to have given some financial assistance for public health purposes to the counties. The provision for County Health Officers remained on the statute books until the revision of 1912, when it was dropped. Some changes were made in the appointment of local boards in 1895, and in this year the important step of placing *the approval of plans for water supplies and sewerage works* in the hands of the Board was made law. The present satisfactory condition of a large proportion of our public water supplies may be traced to this enactment, and to the subsequent stiffening of the law in this respect.

In the years 1896 to 1900 further provision was made in the licensing and inspecting of meat and milk supplies. The recognition of the increasing importance of the lumber trade in the immense forest areas of Ontario, as well as the mining industry led to the enactment in 1901 of *provisions for the sanitation of industries in unorganized territory.* This was the first recognition of industrial hygiene in Ontario.

Up to 1890 the office of the Board was located on the upper floor of Philip Jamieson's shop, at the north-west corner of Queen and Yonge Streets, and in the same year the first Public Health Laboratory was established under the direction of Prof. J. J. Mackenzie, now Professor of Pathology and Bacteriology in the University of Toronto. The laboratory was situated above John Wanless's jewellery shop in the west side of Yonge Street, between Queen and Richmond Streets. Later it was moved to the Biological Building of the University, then to the Medical Building, and in 1911 to No. 5 Queen's Park. Before these lines are read



JOHN DUFF MACDONALD, M.D.,
Chairman, 1894-1900.

we shall probably have moved to more commodious quarters of which some future historian may write.

Professor Mackenzie has been good enough to write as follows:—

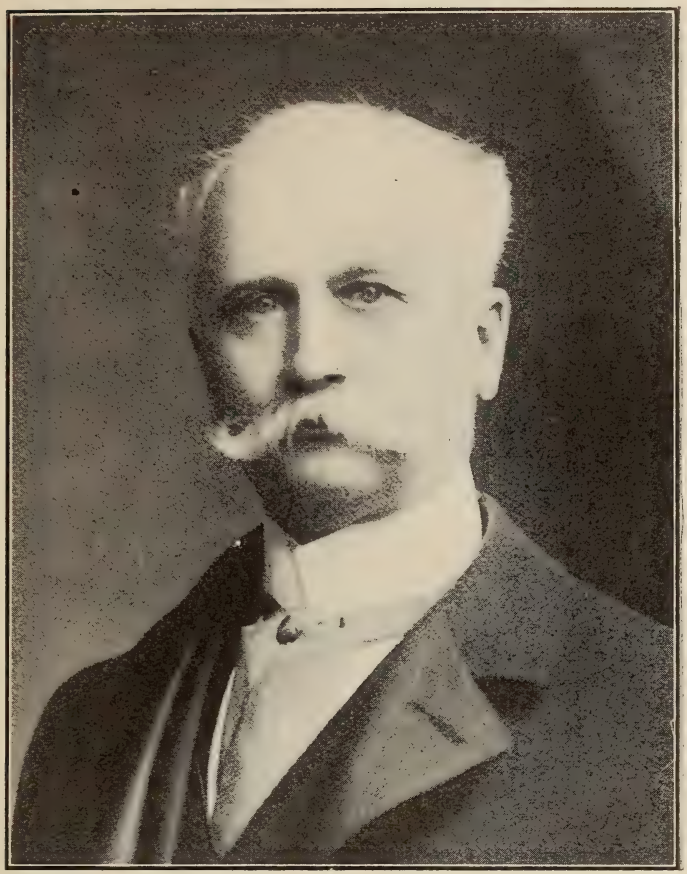
"The Board of Health, at that time (1890) was in the Department of Agriculture, and the offices of this branch of the service were in the upper floors of the building upon the northwest corner of Queen and Yonge Streets. With the establishment of the laboratory, the Board of Health moved into rooms on the top flat of the Wanless Building, a few doors below Queen Street on Yonge Street. The Board remained in these quarters until the present Parliament Buildings were opened, when the laboratory was moved to a room in the Biological Department of the University.

"There was no special appropriation at first for the equipment and maintenance of the laboratory, but this expense was met from an appropriation in the Department of Agriculture for the investigation of diseases of animals.

"Almost the first work undertaken by the laboratory was the investigation of outbreaks of rabies. An interesting point about this was that in 1895 I saw the structures afterwards described as 'Negri Bodies' in the brains of rabbits dying from rabies, in dogs and in the brain of a child who had died of rabies in Hamilton. I thought the structures were degeneration products, and so described them at the meeting of the British Association in Toronto in 1897. In the annual report of the Association for that year there is a brief abstract of the finding.

"The work gradually extended to systematic bacteriological and chemical examination of water supplies. The systematic examination of suspected diphtheria swabs, suspected tuberculosis sputum and blood from cases of suspected typhoid fever, *was begun by the laboratory earlier than anywhere else in America.*

"An interesting study of a local outbreak of typhoid fever near Innerkip was made in 1896 when one of the earliest suggestions of the role of the typhoid carrier, in the causation of circumscribed outbreaks of typhoid, was made. In this epidemic the Widal test was made on all the cases and the contacts. Tuberculin testing of cattle was initiated by the laboratory, and for a time, tuberculin and mallein were imported from the Pasteur Institute, Paris, and distributed where required in the province. About 1895 the laboratory also imported diphtheria antitoxin from the Pasteur Institute and for a few months distributed the supply.



Henry Edward Vaux, M.D.,
Chairman, 1900-1903.

"Throughout this time, as head of the laboratory, I did all the bacteriology and chemical work without assistance except that of a boy to look after the animals and clean up the glassware."

Dr. Mackenzie remained in charge of the laboratory until 1900, when he was succeeded by Dr. John A. Amyot, who, following his appointment as Deputy Minister of Health at Ottawa, was succeeded in 1919 as Director of Laboratories by Mr. H. M. Lancaster, B.A.Sc. Dr. Bryce was succeeded as Chief Officer in 1904 by Dr. Chas. Hodgetts, who for some years previously had been Provincial Medical Inspector. The latter position was in the same year taken by Dr. R. W. Bell, who is still in active service. In the same year a branch laboratory was established in connection with Queen's University, Kingston. This laboratory was for many years in charge of Dr. W. T. Connell, who resigned in 1920, to be succeeded by Dr. James Miller. Dr. Wm. Oldright (1882-4) was succeeded as Chairman of the Board by the following:—Dr. C. W. Covernton (1884-7), Dr. Francies Rae (1887-90), Dr. J. J. Cassidy (1890-4), Dr. John Duff Macdonald (1894-1900), Dr. Henry Edward Vaux (1900-3), and Dr. Edward E. Kitchen (1903-6).

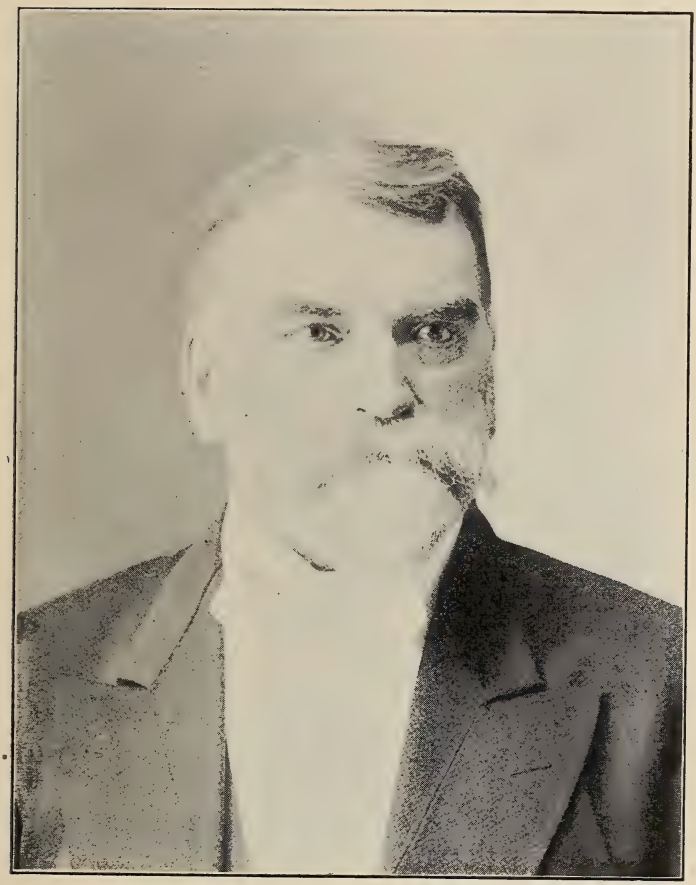
In 1906 Dr. Chas. Sheard, the present Dominion member for one of the Toronto ridings, became chairman. Dr. Sheard had been for some time Medical Officer of Health for the City of Toronto, holding the latter position for 18 years. He was succeeded in 1911 by Dr. Adam H. Wright, the present chairman.

Dr. Bryce, to whom the writer is indebted not only through the reports of twenty-two years, but by personal communications for the greater portion of this review says: "It is a pleasure to me to have recalled these stages in the growth of Public Health in Ontario and to feel, life Æneas relating to Queen Dido his wanderings till he reached the dear Lavinian shores and founded his new home, that I have been an important part of it all."

"*Et quorum pars magna fui.*"

Relative to the laboratory Dr. John A. Amyot writes as follows:—

"When I took over the laboratory in 1900 I was alone, I cleaned the glassware, fed the animals, made up the media and standard solutions, did the examinations, the results of which



Edward E. Kitchen, M.D.,
Chairman, 1903-1906.

(1,250 that year) I reported in longhand. When we moved into the Medical Building we had both bacteriological and chemical assistants and a cleaner. We lacked a stenographer, but signalled to the Parliament Buildings with a white towel when we wanted one. This plan did not work well. In 1902 our first field work in sewage disposal was done in Berlin (now Kitchener). When we moved to 5 Queen's Park the first Pasteur vaccinations were done, the vaccine used being sent by special delivery mail from New York daily. An Experimental Plant (for sewage and water) was established in Stanley Park; the Laboratory in London set up; and the first laboratory 'check off' of a municipal water plant was done at Lindsay in connection with the 'Ozone' purification scheme there."

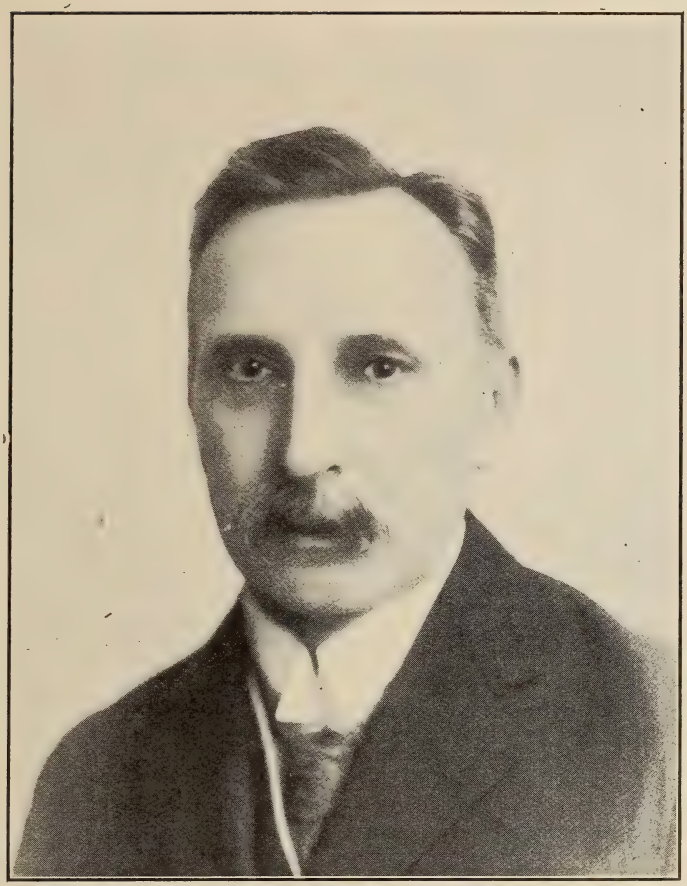
George G. Nasmith, Ph. D., was the first chemist on the staff of the laboratory. He was appointed in 1902 and continued in this position until the year 1910, when he became chief of the laboratories of the health department of the City of Toronto. Despite none too robust health, he served overseas in the war for several years, reached the rank of Colonel, and for distinguished services was awarded a C.M.G.

Dr. Chas. A. Hodgetts, who became Chief Officer of Health in 1904, had previously been Provincial Inspector of Health, and brought to his new position a thorough practical training in the Board's work. The experimental station was established during his period of office, and he points out that in 1904 no fewer than 35 sewerage problems and 25 water situations were investigated, clearly showing the necessity for such an experimental station. In the same year the first official investigation of the sanitary condition of the Muskoka and Kawartha Lakes districts was made. Every year brings to these and the other summer resorts of Ontario thousands of visitors from all over the continent. It is to the credit of the sanitary supervision maintained by the Board that it is only very rarely that a case of typhoid fever can be traced to any of these summer resorts.

The Health exhibit was originated by Dr. Hodgetts in 1908.

The complete history of the Board's service may be found in the reports published from year to year.

The motto of the Provincial Board of Health, "Ne pereat populus Scientia absente" (Let not the people perish for lack of Knowledge) is peculiarly fitted to be the aim of a Public Health Department. It was first proposed by Mr. Irving H. Cameron, M.B., F.R.C.S., Eng., for many years Professor of Surgery in the University of Toronto, who, though not actively engaged in



Charles Sheard, M.D., M.R.C.S., Eng.,
Chairman, 1906-1910.

public health work, has been and still continues to be profoundly interested in the field of preventive medicine. The use of this motto has heretofore been overlooked, if not almost abandoned. It is intended to revive its use in this and future publications of the Board.

THE PROGRESS OF TEN YEARS

The progress of public health in Ontario has necessarily been slow. This has been due chiefly to the immense area of the province (some 403,000 square miles), the comparatively small and scattered population, and the difficulty of securing financial support for what many people have considered a useless expenditure of money. Thanks to the energetic spirit of the members of succeeding Provincial Boards, and particularly to the exertions of my able predecessors, Dr. Peter H. Bryce, the father of public health in Ontario, and Dr. Chas. A. Hodgetts, C.M.G., as well as to Dr. John A. Amyot, for some time Professor of Hygiene in the University of Toronto, wide knowledge of the value of preventive medicine had been spread among our people. The writer joined the Board in 1906 under the ministry of a broadminded member of the Government, the late Hon. W. J. Hanna, K.C. In 1910 Dr. Hodgetts resigned the position of Chief Officer of Health to become Medical Adviser to the Commission of Conservation, and was succeeded by the writer. One of the earliest duties at this period was to secure a consolidation of the public health laws, which had been for some years under consideration by the Board. This was accomplished in 1912. An important addition to the Act provided for the appointment of ten District Officers of Health. At the outset seven were appointed, five of whom were assigned to the older portion of Ontario and two to the newer and less organized portion. The District Officers are legally qualified medical practitioners, who were given a special training for their work. They are full-time men, who have given the greatest satisfaction in their respective areas. An additional officer was appointed for the area adjacent to Sault Ste. Marie this year.

The Board ordinarily meets at intervals of three months, and it was found that many matters, such as the approval of the plans of water and sewerage works, were unduly delayed by having to wait for a meeting of the Board. To obviate this difficulty an amendment was secured in 1911, giving the Chief Officer all the powers of the Board in the interval between meetings. The

status of the local Medical Officer of Health has been much improved by the new Act, which provides that he can not be dismissed, except for cause and with the approval of the Board. In addition the Medical Officer of Health is made a member of the local Board of Health and its executive officer, and an additional amendment, passed in 1918, referred disputes as to the salary of the Medical Officer of Health to the County Judge. An annual conference of health officers was established by the Act, and since 1912 local Medical Officers of Health have met every year.

The several amendments respecting the Medical Officer of Health have served to secure some continuity in his tenure of office. The emolument, never very large, has been increased in the majority of cases, and the general personnel has been improved so far as could be expected in a part time service given by men busy in practice. There are some 830 municipalities in Ontario. These are served by about 730 Medical Officers of Health.

In the year 1919 the Board, which had heretofore been a part of the Department of the Provincial Secretary, was transferred to the Department of Labour, of which the Hon. Walter R. Rollo is minister. In the following year the plan of divisional administration was adopted.

Division of Laboratories,

The Public Health Laboratories of the Board at Toronto and Kingston were supplemented in 1911 by one at London in connexion with the Institute of Public Health in that city. An Experimental Station in Stanley Park, Toronto, was opened in 1908, and has grown to extensive proportions. At this plant the various types of water purification and sewage disposal are shown, and experiments carried on in this important work. Additional public health laboratories were established at Fort William in 1919, and at Sault Ste. Marie and North Bay in 1920. Each of our laboratories is now in charge of a competent full-time director and carries on public health laboratory work of every variety. Thus our laboratory system has grown from the modest unit of 1890, established under Prof. J. J. Mackenzie over a shop in Yonge Street, Toronto, to seven extensive and well-equipped ones placed at strategic points all over Ontario. Many of the larger cities now have laboratories of their own. The various laboratories of the Board supply a free service to the medical profession and public. In addition to the ordinary work of a laboratory, the Toronto Laboratory prepared and supplied free of cost to the Department of Militia and Defence, the major portion of

the T.A.B. vaccine used in the Great War for the protection of Canadian soldiers against enteric diseases. The cost of the vaccine supplied would at ordinary commercial prices approximate to a million and a quarter dollars, and what is of infinitely greater value, may fairly be claimed to have saved thousands of lives which might otherwise have, as in former wars, succumbed to typhoid fever. The Laboratory prepares pertussis vaccine, preventive treatment for babies' sore eyes, and provides the Pasteur preventive treatment for rabies. Within the last year the preparation of arsphenanine has been undertaken, and our product (called Phenarsenanime) is in general use in all our Venereal Disease clinics. In 1899 there was a total of 1,370 specimens examined in the only laboratory (Toronto) then in existence. In the present year, notwithstanding the fact that six other of our laboratories are carrying on public health work in Ontario, the Toronto laboratory averaged about 1,000 specimens a week.

Free Distribution of Biological Products.

In the year 1914 the Board began a practical demonstration of the possibility of supplying to the people of Ontario biological products, such as diphtheria antitoxin, at prices much below those of commercial houses. This plan had been anticipated to some degree in 1910 when there was an outbreak of rabies in the western portion of Ontario. Previous to that date the nearest available Pasteur Institute was in New York City. The expense for the preventive treatment of persons bitten by rabid dogs under such circumstances was frequently beyond the means of any but wealthy persons, and in some instances had to be borne by the municipality. Arrangements were made whereby this treatment was afforded at a cost of twenty dollars per person. In 1914, when Dr. J. G. FitzGerald, with the very cordial and hearty co-operation of Sir Edmund Osler, then Chairman of the Medical Section of the Commission of Conservation and a Governor of the University of Toronto, established in the University of Toronto the Antitoxin Laboratory, the Board was able to make arrangements for the supply of antitoxins and vaccines at an extremely low price. This plan was in 1916 succeeded by a system of free distribution of biological products of all kinds. This contribution to the public health service is largely due to the generosity

of Col. Albert E. Gooderham, a public-spirited citizen of Toronto. This gentleman donated a farm of some 51 acres with suitable buildings to the University of Toronto for an antitoxin laboratory. This property is known as the Connaught Laboratories, and here the various biological products are prepared. They are sold practically at cost to the Board, which in turn supplies them free to the public. The establishment of these laboratories has made diphtheria antitoxin, etc., of first-class quality available at cost price, not only in Ontario, but to all of Canada. Carefully collected statistics of late years have shown that the mortality from diptheria among us has been greatly reduced. For example, in 1903 there were 31 deaths in every 100,000 of population, while in 1918 the rate had been reduced to 12 in the 100,000. If the knowledge of the value of antitoxin were widespread and every case treated by this means on the first day of the affection the mortality from this dreadful disease would soon be reduced to nothing and the disappearance of the disease itself would be within the range of possibility.

Maternal and Child Hygiene and Public Health Nursing.

Just before the commencement of the Great War a beginning was made towards the establishment of a Child Hygiene Bureau. Progress during the war period was necessarily slow because of lack of funds. The subject was actively taken up during 1919, and in the present year a Division with the aforenamed title established.

In forming this Division the Board had in mind the excellent results attained by a somewhat similar movement in New Zealand, begun years ago by Lady Plunkett, and carried into successful operation by the efforts of Dr. Truby King. This movement among our kin on the other side of the world has had remarkable success in reducing the infant death rate, etc., making New Zealand the premier nation of the world in the care of the health and lives of its babies. There is no reason why similar success may not be attained in Ontario.

A director, assistant director and a pediatrician were appointed, and a group of nurses trained for the purpose of establishing community health centres and baby clinics throughout Ontario. A travelling clinic was organized and the "Child Welfare Special" secured. The work is now in active operation and promises splendid results.

The saving of child life does not depend altogether upon

work among the babies themselves. Efforts in this direction are commendable and of great value. Much in addition may be accomplished by supervision of the pregnant mother. Our work is not among the well-to-do, who are likely to have medical supervision during pregnancy. There is greater need among the middle and poorer classes of people. What the pre-natal clinic will accomplish is strikingly illustrated by the records of the Burnside Lying-in Hospital in Toronto during the last two years. These are as follows:—

	Semi-private cases.	Public Ward cases unsupervised.	Public Ward supervised by a clinic.
Number of cases...	1,198	505	416
Death of mother...	10. (0.8%)	18 (3.5%)	2 (0.4%)
Still-births	45 (4.0%)	40 (7.9%)	6 (1.3%)
Eclampsia (Convulsions) ...	20 (1.6%)	16 (3.0%)	2 (0.4%)

The comparison is made plainer if one analyses the different groups in terms of 1,000. Thus it will be seen that in the semi-private cases which were unsupervised the mortality was 8 per 1,000 births, in the public ward unsupervised cases 35 per 1,000, while in the supervised public ward cases the rate was only 4 per 1,000. In still-births the rates for the corresponding groups were 40, 79 and 13 respectively. In the case of eclampsia the ratios were 16, 30 and 4 per 1,000. Is there any better argument for medical supervision of pregnant mothers? To secure proper attention for the mothers and their babies in the field assigned this Division.

Miss Mary Power, B.A., is the Director and Miss Beryl Knox, R.N., Assistant Director. Dr. W. J. Bell is Pediatrician.

Much of the initial effort in formulating the plan of the Division is due to the Board's Consultant in Pediatrics, Dr. Alan Brown. To him and his associates is due the credit of training our nurses and other officers of the division. The addition of a dietitian, and of a *Consultant in Obstetrics, will prove of further assistance. It is scarcely necessary to point out the

*(B. P. Watson, M.D., F.R.C.S., Edin., Professor of Obstetrics in the University of Toronto, has just (1920) been appointed Consultant in Obstetrics)

value to any country of the proper care of infant life. Not only will an immense proportion of child life be saved by suitable measures, but it is safe to predict that the physique of our people will in future years be found to have been greatly improved by the efforts in this field of preventive medicine. Viewed in the light of our present knowledge this is probably the most promising field of public health work in this country.

Educational.

The Board has long recognized that the education of the people in the value of public health measures is the surest way to stimulate interest in this subject, and to gain the financial support necessary to carry out modern sanitary measures. The Health Exhibit referred to is one means, the distribution of sound literature upon topics of preventive measures another. It has been found to be comparatively easy to gain public support of sanitary measures when the public understand their value. So the Board has systematized the distribution of literature by making the public schools, the Women's Institutes, and other voluntary agencies the means of distribution. The publication of Health Topics in the weekly papers, and advertising to some extent have been utilized. In the present year a Division of Public Health Education has been established and its direction placed in the hands of a competent physician, who is charged with the work of disseminating useful public health knowledge. J. J. Middleton, M.B., D.P.H., is Director of this division.

Public Health Exhibits.

From a small beginning originated by our predecessor the exhibit feature of the Board's educational programme has grown to large proportions and includes a general exhibit in all phases of public health work, including motion pictures, models, child hygiene, tuberculosis, venereal disease, sanitary engineering, etc. The exhibit has been shown almost in all parts of the province accessible by rail, and forms a splendid feature at the great exhibition held for two weeks each year in Toronto. This year we added a "Child Welfare Special," of which greater details are given in the remarks upon maternal and child welfare.

The following remarks from one of our Toronto papers indicate public opinion regarding the exhibit:—

"The stress being put on the importance of health by the Drury Government is much to the credit of the Administration. Whether the Provincial Health Officer, Dr. McCullough, is being given a freer hand by Hon. Walter Rollo, the Minister of Labour and Health, than he had under previous Ministers, or there is some other explanation, the fact is that between them the province is taking greater strides towards improving conditions throughout its bounds. The exhibit of the Health Board at the Canadian National Exhibition affords tangible evidence of the enterprise of the authorities.

"Among the exhibits is a splendid large motor car that is to provide travelling clinics in the rural districts. Municipalities wishing to have demonstrations in ways and means of improving the health of their communities are invited to list themselves for that purpose.

"Another feature of the exhibit is made up of sample meals for children at various ages, and the preparation of menus giving milk and fruit a prominent place. At certain hours of the day talks are given to the children visiting the Fair by their friend, the commuinty nurse.

"One more evidence of the increased activity of the provincial authorities is the appointment of a Director of Public Health Education."

Division of Sanitary Engineering

Nothing of a sanitary nature is more conductive to health and comfort than good water and satisfactory sewerage facilities. The early members of the Board were, fortunately, alive to the necessity of gaining control by legislation of the lavish natural water supplies of Ontario. In brief this legislation provides severe penalties against the pollution of lakes and streams, and places under the control of the Board the installation of water and sewerage works.

The plans and specifications of all water and sewerage works come before the Board for approval, without which such works cannot be financed. For the protection of the public health the Board may order the construction of filtration plants, sewage disposal works, improvements in construction, etc.

For many years the Board has encouraged the construction of water purification works, and the establishment of the most modern means of sewage disposal. Meticulous attention has

been paid to the preservation in their pristine purity of our lakes and rivers. In 1910 there were ten water purification plants in Ontario. In 1920 these had increased to the extent that 42 per cent. of public water supplies are now protected by filtration works, and 82 per cent. are protected by chlorination. The supervision of the water stretches in the Muskoka districts, among the Kawartha Lakes, and other summer resorts, has had our constant attention.

The sanitary engineering service has been carried on under a competent engineer since 1911. It has this year been established as a Division, which has supervision of the Experimental Plant already referred to. F. A. Dallyn, C.E., has charge of this Division.

One of the most important pieces of work undertaken by this service was the sanitary investigation of the international waters. This was carried on during the season of 1912-1913 for the International Joint Commission, in association with engineers and chemists of the United States Public Health Service, the Superior Board of Health of Quebec, and the State Boards of Health of New York and Michigan. All the waters from the Lake of the Woods to Cornwall on the St. Lawrence were thoroughly examined by the joint service. The results are tabulated in a voluminous report issued by the Commission. This report, as well as further studies in relation to sewage pollution of water, form the basis of a plan for the care of the sewage of certain large urban centres on the international waterways lying between the United States and Canada. Each season the Board employs a number of engineers in making sanitary surveys throughout Ontario. Arrangements have been made with the University of Toronto for the training of a number of young graduates in sanitary engineering. In order to note public appreciation of the service of the Division, the following article from one of our metropolitan dailies may with propriety be quoted:—

"Ontario has good reason to be pleased with the advances that have been made in ten years to insure pure water for domestic use from municipal waterworks systems. The broad statement that pure water is essential to good health does not express the full meaning. Prior to the development of the science of bacteriology the association of water with enteric diseases was largely conjecture from coin-

cidences of the prevalence of the disease and the use of water from a particular source. Recent investigations have suggested that diseases other than typhoid are associated with water impurity, and that a reduction in the typhoid rate means improvement in the general mortality rate.

"A movement for the improvement of water supplies in the United States and Canada naturally followed laboratory findings, but was handicapped by an uninformed public. The Province of Ontario was affected by the prevalence of the disease in the State of New York, the States of the Middle West, and the flow of population across the boundary. Improved legislation was granted the Provincial Board of Health in 1912, and a renewed effort to improve existing water supplies was undertaken. What has been accomplished places Ontario in a leading position so far as typhoid reduction is concerned. With a mortality from this disease in 1919 of only 5.2 per 100,000 of populatin, as compared with 31.5 ten years ago, Ontario may be said to be making big strides in sanitation."

Division of Venereal Diseases.

Previous to the war the problem of the control of syphilis and gonorrhœa had received little attention in Canada. No part of Canada had any legislation bearing on this subject. Conditions in the army focussed public attention upon the question, and there was some discussion in the press as to whether or not the soldiers sent overseas were being sufficiently protected against the venereal evil. It soon became apparent that the measures of control adopted in the army were of greater value than those in effect among the civil population. Enlistments showed that, proportionately, there was more venereal disease in the civil population than in the army. In September, 1916, out of nearly 42,000 Canadian troops in Great Britain there were 960 venereal disease cases. During the month of September, 1918, of 110,000 Canadians in Great Britain there were but 750 cases, a reduction in the admissions during this interval of 66 per cent. The evidence of effective measures used in the army, the report of the Sydenham Royal Commission in England, and the efforts of an Honorary Advisory Committee in Military District No. 2, and of the Toronto Academy of Medicine influenced the Ontario Government to appoint the Hon. Mr. Justice Hodgins as a Royal Commission of Investigation in 1917. The result of the report of this commission was that in the Session of 1918 the Government passed the Venereal Diseases Prevention Act, the earliest

comprehensive legislation of the kind in Canada. In the summer of 1917 the Committee referred to, associated with the Provincial Board of Health of Ontario, had taken up with the Dominion Government the question of issuing a license to the Board to produce an arsphenamine product under the War Measures Act in order to reduce to reasonable proportions the cost of this remedy. This license was granted in March, 1920, and our product (which we have named Phenarsenamine) is now in use in our clinics and Boards of Health. With the assistance of the public health officers of other provinces of Canada, and of social workers interested in the question of venereal disease, pressure was brought by the Board to bear on the Dominion Government to give financial aid to the provinces in the care of venereal cases, and at the recent session of Parliament the sum of $200,000 was voted for this purpose. This money is to be distributed to the provinces in proportion to population on condition that an equal amount is voted by the several provinces. In the present year Ontario voted $115,000 for venereal disease work, a Division of Venereal Disease was formed, and ten clinics have been established. Our plan of procedure in forming clinics is as follows:— To a hospital or Board of Health we offer a grant of $1,000.00 for the equipment of a clinic; $500.00 annually towards the expense of a social worker, and $500.00 annually towards the pay of the specialist in charge of a clinic. For treatments we pay fifty cents each in case of either gonorrhœa or syphilis, and in case of bed patients twenty-five cents additional. We also furnish standard history sheets and report forms, and free Phenarsenamine. A strong National Council for combating venereal disease along the lines of that established in England has been formed with the Hon. Mr. Justice Riddell, a broad-minded Canadian as the President. The Board appreciates the assistance already afforded by the organization. The indefatigable Secretary, Dr. Gordon Bates, possesses the energy of several persons, and is an active worker in promoting everything likely to assist in curbing the ravages of venereal disease.

As in respect to all other phases of public health work the Board has strong views on the value of education in venereal disease work. A number of excellently written booklets on various phases of the subject have been prepared, and in addition

a little volume entitled "To-day's World Problem in Disease Prevention," donated by Dr. John A. Stokes, of Rochester, Minn., U.S.A., has been widely circulated among the medical profession. We are happy in having the co-operation of the various medical societies of Ontario, and plans are under way for lectures and the presentation of motion pictures at society meetings. Dr. R. Roy McClenahan has charge of this Division.

Division of Industrial Hygiene.

This is one of the newest of the Board's activities. Ontario, while in the main devoted to agriculture, is rapidly becoming, particularly in certain localities, a great industrial centre. We have extensive timber areas, our mining resources, notably in iron, silver, gold and copper, are of enormous extent. Our nickel mines are probably the largest known. The development of cheap electricity from the utilization of our immense water powers has stimulated industrial growth, particularly in Toronto, Hamilton and places in the Niagara Peninsula. Milling, pulp, paper and agricultural implement manufacture, etc., give employment to a large proportion of our population.

For these reasons it became evident that attention should be given to maintaining safe sanitary conditions for the employees, the prevention of occupational diseases, and to afford information to employers of labour respecting the sanitary conditions arising in connection with their works.

A division of Industrial Hygiene was established this year, and the Director and his assistants are formulating plans designed to form a basis for future development. The legislation upon the subject of health in relation to labour, for Great Britain, the United States and Canada, has been compiled and published. Steps are being taken to collect a reference library on this subject. Studies are being made of the work of this character established in Great Britain and other countries. The subject is one of extensive scope, and future reports will probably record wide development in this field of work. J. Grant Cunningham, B.A., M.B., D.P.H., is the Director of this Division.

To be completed in the March issue.

UNIVERSITY APPOINTMENTS

The following appointments to the staff of the University of Toronto for the academic session of 1921-2 were recently made by the Board of Governors:

Faculty of Medicine—Sub-department of Pediatrics—Dr. A. P. Hart, Dr. Roy Simpson, Dr. F. F. Tisdall, as Clinicians in Medicine.

Surgery—Dr. Robert Janes—Fellow.

Therapeutics—Dr. F. M. R. Bulmer—Fellow.

PERSONAL

Dr. W. B. Thistle has taken an office at 124 Bloor Street West and is confining his practice, as formerly, to General Medicine.

Dr. Howard H. Burnham, 52 Bloor St. W., Toronto, is now devoting his practice exclusively to diseases of the ear, nose and throat.

OBITUARY

Death of Dr. Moses Aikins

Dr. Moses Henry Aikins, one of the out-standing figures in Canadian Medical circles, died on December 19th at Burnamthorpe, Peel County. The Doctor was in his ninetieth year. Up till six years ago he continued to practice his profession. We are safe in saying that no general practitioner in Ontario was quite as well known as Dr. Moses Aikins. He was born at Burnamthorpe, on the old homestead where his grandfather settled in 1816, and on which Dr. Aikins lived all his life. Dr. Aikins was at one time Professor of Anatomy in the old Toronto School of Medicine. His three brothers were, Hon. Sir James Aikins, Ex-Lieutenant-Governor of Manitoba; John Aikins, who died in 1896; and W. T. Aikins, Professor of Surgery in the old Toronto School of Medicine. Dr. W. H. B. Aikins and Sir James Aikins, present Lieutenant-Governor of Manitoba, are nephews.

Death Summons Dr. Allen Baines

It was a matter of keen regret that the Profession read in the daily press of January 13th, that Dr. Allen Baines, one of the best beloved of City Practitioners, had passed away at his home, 228 Bloor Street West, in his sixty-ninth year. Dr. Allen Baines had achieved great success and honor for his work in the Hospital for Sick Children, and in previous years as a Lecturer at Trinity Medical School.

He was born in Toronto and graduated from the Medical School of the University of Toronto in 1878, afterwards putting in two years in post-graduate work in London.

CORRESPONDENCE

A Timely Warning

To the Editor of the *Globe*: A daily newspaper recently commented on the temporary suspension of ninety physicians in the latter part of November in the matter of their liquor prescriptions and orders on Ontario Government dispensaries.

It may be that an authoritative statement is desirable. There were ninety-two suspensions at dispensaries of physicians consequent upon their October records, but with the exception of two, none remained suspended quite two weeks, and some only a few days, the brevity of the latter being due to assurances proffered by physicians affected.

Many who had been suspended at dispensaries acknowledged in letters or personal interviews the soundness of the board's views and deductions. The newspaper mentioned said the question which the board was handling was one "which no lay body should settle." The board sought to persuade the College of Physicians and Surgeons or the Ontario Medical Council to undertake the responsibility, but they refused and advocated the laying of this duty upon the board. The official report of proceedings of the Ontario Medical Council of June, 1920, establishes this. The Legislature accordingly conferred upon the board certain powers of disciplining which it had sought to exercise in the public interest.

The board lacks power to suspend a physician from issuing six-ounce liquor prescriptions upon druggists. Its power to suspend relates only to dispensaries, prescriptions upon which may be for an imperial (40 ozs.) quart of distilled liquor or wine, or a dozen of porter, stout, ale, etc. It is obvious that so large a bottle as an imperial quart—a "crock," in bootlegger parlance—should be prescribed with judgment by the physician.

Before physicians received notice of the board's limitation of fifty dispensary prescriptions per month, the record of such by all practising physicians in Ontario was found to be, taking May, 1921, for example, as follows:

Six point headings

	Doctors.	Liquor Prescriptions.	Aver.
A, non-issuers	884		
B, 1-25 in month	2,000	14,307	7.15
C, 26-50 in month	346	12,486	36.08
D, 51-75 in month	142	8,686	61.17
E, over 75 month	52	4,976	95.69
Totals	3,424	40,455	11.81

The two high classes here numbered only 194 out of 3,424 physicians. The board accepted the standard of the 3,230, not the 194, and set fifty per month as the maximum limit of liquor prescriptions on dispensaries. Herein the board may have erred on the side of liberality, there being basis for the argument that twenty-five per month are ample for even large practices under normal conditions, and hence that physicians who crowd fifty every month or exceed it, in the face of the example of their confreres, are taking liberties with the Ontario Temperance Act.

Such explains the basis of the ninety-two suspensions. That the effect was salutary is proved by the fact that only sixty-two physicians exceeded fifty on dispensaries in November, short suspensions again following. It is expected that the lesson of the majority will soon have been learned and that the two high classes may shortly disappear altogether, and that

without increase of the death rate. That there is no reason for nervousness is further evident from the resolution of the Ontario Medical Council of June, 1918, to the effect that "the quantity of alcoholic liquor for internal use should be limited to eight ounces," so that the imperial quart cannot be needed nearly as often as it has been prescribed.

Is it not obviously, then, the board's bounden duty as administrator of the Ontario Temperance Act to exert itself constantly to repress abuses in liquor prescriptions, and to insist upon observance in such of the principle laid down in the act of "actual medicinal need," based upon the judgment of the physician?

We yield tribute to the medical profession and to adhesion by the great majority to the lofty ethics that form its standard. It is only the small, unrepresentative and declining minority that needs discipline.

In 1920 the then President of the Ontario Medical Council, Dr. A. T. Emmerson, of Goderich, expressed the representative view thus:—

"So long as the act remains in force, and the liquor to be used for medicinal purposes only, I can see no other way than for the physician to determine when this is necessary; and until we are prepared to go to the Government with some feasible scheme for otherwise dispensing alcoholic liquors, we must continue, not simply to carry out the spirit of the provisions of the act ourselves, but as a Council to urge the profession to likewise do so, and to do our part in disciplining those who violate the law. The welfare of the public and the honor of the profession demand this."

Pursuant to the policy thus enunciated, the Ontario Medical Council has itself punished by suspension for various periods of the right to practice (a much more serious punishment than that by the Board of Suspension at dispensaries) of certain physicians who have been convicted in the courts for flagrant O. T. A. convictions. So that excessive prescribers can claim no warrant from either the leaders or from a majority

of their profession; the board rather, can claim the warrant, not merely of the law, but of the profession for its course.

Since there is reason to believe that many imperial quart prescriptions are issued when medicinal need would have been met by the six-ounce bottle, it is well that the public should know the provisions for procuring the latter.

The alternative six-ounce prescription is obtainable in original sealed bottles from druggists, to whom the dispensaries wholesale them in cases of different brands or in assorted cases, at prices which permit retailing at 75c, 90c or $1 each, according to the brand, at the same time securing to the druggist a net profit of not less than 40 per cent. This rate of profit is ensured regardless of distance, as the dispensary wholesale price to druggists includes delivery. Druggists are availing themselves increasingly of these options, with the result of absolute satisfaction to patients both with regard to quality and price. Moreover, in cities where dispensaries are located, the original six-ounce sealed bottles can also be procured for them. In other cities and towns, druggists are necessarily looked to as supply.

I trust that this unvarnished explanation will be welcomed by the public as clearing up points that are possibly not as widely understood as is desirable, and therefore will thank you for kindly affording this letter space in your valuable columns.

W. S. Dingman, Vice-Chairman

Toronto, Ont.

BOOK REVIEWS

International Clinics

A Quarterly of illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology. Pædiatrics, Obstetrics. Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to students and Practitioners by leading members of the Medical Profession through-

out the world. Edited by H. R. M. Landis, M.D., Philadelphia, Pa., Volume III., 31st series, 1921. Philadelphia, London and Montreal: The J. B. Lippincott Company. 1921. Price $2.50 per volume, or $10.00 for series of four volumes.

This number contains a symposium on actinomycosis; Clinics on abscess of the prevesical space and umbilicus; Meckels diverticulum incarcerated in an inguinal hernia. Under Medicine, Parkes Weber writes on thrombosis of the Inferior Vena Cava and renal veins; heart block; neuroses and psychoneuroses and the therapeutic value of food. Under Pædiatrics, articles appear on disturbances of hearing in children and their influence on their development; and R. G. Freeman gives a clinic. Magnuson and Coulter contribute the chapter on industrial medicine. Under Surgery, appear papers on reduction of fractures of the lower end of the radius, radical cure of hydrocephalus; fractures of the skull, surgical kidney and a symposium on the acute abdomen.

The Stairway.—By Alice A. Chown. The Cornhill Company, 2a Park Street, Boston, Mass. Price $2.00.

To-day's feminine movement with all that it carries of mental ferment and confused outlook is mirrored in "The Stairway." It is apparently largely a reflection of the author's turbid mental attitude in seeking that elusive modern desideratum of restless womanhood—freedom to express herself.

In the course of her search she stumbles into a bogland of 'isms, and serenely takes leave of her readers there with the triumphant assertion, "I have won my freedom."

The author has not yet learned how to handle her material, nevertheless, the book is most readable, as a reflection of advanced bewildered femininity.

Jen of the Marshes.—By John Frederic Herbin, author of "History of Grand Pre," "The Marshlands." The Cornhill Publishing Co., Boston, Mass.

This is a splendid story and we can imagine nothing more suitable for the entertainment and amusement of the convalescing patient.

Radiations from Slow-Radium.—By John B. Kramer. With

a note on Therapeutic Value by John Hall-Edwards, L.R.C.P. (Edin.), D.M.R. & E. (Cantab.), F.R.S. (Edin.), Hon. F.R.P.S., Late Major R.A.M.C. With fifty-three illustrations. Bailliere, Tindal & Cox, 7 Henrietta Street, Covent Garden, London, W.C.2, England. 1921. All rights reserved. Price 12/6 net.

This is a concise handbook on the fundamentals of radio-activity—especially designed for the medical profession. The particular aspect of radio-activity with which the author deals is that which he calls "slow-radium." This is described as a substance made up of the lesser concentrations of Radium, Uranium, and Thorium, and physical experiments are cited to prove the value of its radiations. "Slow Radium" applicators for therapeutic purposes can be made of any size and in this quality the author claims its superiority over radium in certain diseases such as neuritis, arthritis, lupus, etc. While the opinions expressed as to its therapeutic value are most interesting, one is impressed by the fact that there is very little clinical evidence to substantiate them. However, the substance seems to have possibilities, and it is to be hoped that these will be developed more fully by further investigation.

The Blood Supply to the Heart in its Anatomical and Clinical Aspects.—By Louis Gross, M.D., C.M., Douglas Fellow in Pathology, McGill University, and Research Associate, Royal Victoria Hospital, Montreal. With an introduction by Horst Oertel, Strathcona Professor of Pathology, McGill University, Montreal. With twenty-nine full page plates and six illustrations. Paul B. Hoeber, 69 East 59th Street, New York. Price $5.00.

By injecting the blood vessels of the heart with a barium suspension at regulated pressures and in rendering the heart muscle translucent the circulation of the heart was studied by the author by stereoscopic X-Ray photographs and by dissection.

His work was started as a study of the circulation of the heart at various age periods but the work was further elaborated by a summary of the previous work on the circulation of the heart.

Two findings of considerable clinical interest were the blood supply of the valves of the heart and the blood supply to the neuro-muscular bundle.

Gross found that vessels persist in the valves of the heart to

a later stage of post natal life in some persons than in others and that these vessels are most apt to persist in the parts of the valves which are most commonly attached by acute endocarditis. From these findings he is led to suggest that in most cases endocarditis is the result of an embolizing bacteriemia which causes emboli to form in the vessels on the valves.

The book is divided into four parts. 1. A complete description of the arterial and venous blood supply of the heart. 2. The blood supply of the bundle of *His*. 3. A discussion of the anatomical factors determining the location and etiology of acute endocarditis and 4. The cardiac circulation in the various age periods.

The presentation of the subject is complete, the illustrations and the printers work leave nothing to be desired.

Eye, Ear, Nose and Throat Nursing.—By A. Edward Davis, A.M., M.D., and Beaman Douglass, M.D. Second revised edition with thirty-two illustrations. Philadelphia: The F. A. Davis Company, publishers. 1920. Price $2.50 net.

This is a very useful book if read and studied by nurses with a proper conception of their limitations. The tendency is to tell the nurse too much. So far as the medical student is concerned he will find much that will be of help to him. The instruction in the managsment of special cases will be found very helpful inasmuch as the physician will require to be both specialist and nurse at the same time.

The Spleen and some of its Diseases.—Being the Bradshaw Lecture of the Royal College of Surgeons of England, 1920, by Sir Berkeley Moynihan, Leeds. With thirteen full page diagrams. Philadelphia and London: The W. B. Saunders Co. 1921. Price $5.50 net. Canadian Agents, The J. F. Hartz Co., Limited, Toronto.

The functions of the spleen are far from being fully understood at the present time. This book by Sir Berkeley Moynihan containing the material upon which he based the Bradshaw Lecture, is an admirable survey of the present knowledge of the functions of this more or less mysterious organ. It sets forth in concise and readable form the historical, experimental and clinical evidence of its relationship to diseases of various types, and indicates the present-day opinion as to surgical procedures invol-

ving the spleen. There is a tendency on the author's part to dogmatize where a critical survey of the evidence leaves the point still unsettled. The book is written in delightful style, the references are complete, and the illustrations excellent. It deserves a place in the library of every physican or surgeon who is desirous of keeping abreast of the times.

THE MANAGEMENT OF ESTATES *

How often does it occur that the family Physician is consulted by a patient as to the best step to take regarding the administration of his or her estate. In former years a Doctor felt somewhat backward in discussing such a subject, but it is no longer considered improper to advise as to the best procedure in case of necessity arising: There can be no doubt as to the benefit of a Trust Co's services under such circumstances. A Company that makes a specialty of the administration of estates is The Canada Permanent Trust Co., Toronto. This Company has a large Capital and Reserve fund; a conservative, yet progressive, management, with the usual careful supervision from both the Provincial and Federal Governments. Any estate placed in charge of The Canada Permanent Trust is assured every protection and no risk is taken.

ROBOLEINE *

The Reconstructive Food

Roboleine is manufactured by a special process, carried out under the most scrupulously hygienic conditions, and consists of Red Marrow from the long bones, and Jelly from the rib-bones of oxen ; our well-known "Cream of Malt," made from the finest germinating Scotch Winter Barley and declared by the LANCET to be *"La crême de la crême* of Malt extract;" Egg-Yolk (containing Lecithin) ; and neutralised Lemon Juice. Of these constituents, the Jelly, the Red Bone Marrow and the Egg-Yolk (containing Lecithin) provide the Vitamine, *fat-soluble A;* the "Cream of Malt" and the Egg-Yolk provide the Vitamine, *Water-soluble B;*

*Publishers' Department.

and the neutralised Lemon Juice provides the Vitamine, *Anti-scorbutic C*. 'Roboleine' therefore, contains abundantly at least the three Vitamines at present recognized by science. All of these are essential to the healthy existence of human beings of every age. The *Fat-soluble A* promotes the growth of children and prevents rickets. Moreover, in the case of both children and adults, this Vitamine maintains the normal temperature of the body and renders it resistant to bacterial disease. The *Water-soluble B* also promotes growth, and is anti-neuritic. The *Anti-scorbutic C* is a preventive of all kinds of scurvy. Of the other constituents, the Maltose, Diastase and Protein present in the 'Cream of Malt,' account for the high value of 'Roboleine' as a food digestive; Lecithin is a valuable metabolic agent and nerve food; and the natural nitrogenous and phosphoric compounds ('Roboleine' contains no *drugs*) are all elements necessary for renewing and building up wasted tissue.

'Roboleine' is invaluable as a reconstructive in cases of of reduced vitality caused by minor nerve troubles, worry and over-work; in infantile diseases such as rickets and croup; in wasting diseases of all kinds—e.g., phthisis, anæmia, leukæmia, lymphadenoma, etc.—and in those cases where a debilitated stomach, or other cause of imperfect assimilation of food, has rendered convalescence slow and difficult.

HOW DOCTORS MAY BECOME FINANCIALLY INDEPENDENT*

It is, alas, true that a large proportion of medical practitioners make unfortunate investments, resulting in their families finding it a little difficult to live as they would like. This need not be the case if professional men would make a habit of consulting a reliable Investment Broker before paying out their surplus funds. Messrs. G. A. Stimson & Co., 36-38 King St. East, Toronto, a firm established in 1888, make a specialty of advising their clients on each and every issue and will appreciate the opportunity of extending their facilities to Physicians, many of the Profession having been their clients over a period of years. Doctor! save yourself a rude awakening before it is too late.

*Publisher's Derartment.

The Canadian Journal of Medicine and Surgery

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Editorials

The Academy of Medicine, Toronto

On Tuesday evening, January 31st, the Academy of Medicine held one of the best meetings of the current winter. The meeting was called to order in the new Auditorium, Vice-President Dr. W. H. Harris occupying the Chair, President Noble being unavoidably detained.

The first item on the programme was the unveiling of a bronze Memorial to those Fellows of the Academy who served overseas in the Great War. The wife of the President, with a few fitting words, unveiled the Tablet, and Dr. N. A. Powell, Chairman of the Hospital Supplies Committee, made the formal presentation. Dr. Powell spoke as follows:

> "For a hundred thousand years, mankind, struggling upward, had come to recognize the family—not the individual—as its unit, the fireside as its centre, and food, warmth and safety as its essentials.

Then came the 4th of August, 1914 and

"The ages slow-bought gain
Was shattered in a night."

A maniac set out to dominate humanity as he had come to rule his own country. In the golden book of Munich, he had written "Suprema lex regis voluntas" and of his public utterances, this was a type,—"There is only one master in this country. That am I. Who opposes me, I will crush to pieces."

Behind him ranged the mightiest army the world had ever seen, and a people that in the lust of conquest had sold its soul to the god of force.

To gain his ends, France must be crushed and England made to sue for peace. Then, his mad dream of Canada and of the near-East available for all future German expansion, would have rounded into reality, and to all who dared to resist—from the borders of Belgium onward—would go this word:—

"It is mine to command and yours to obey
Lest I wipe you out from the light of day."

Listen to a general order issued on the 26th of August, 1914, submitted to the War Lord and *never countermanded*:—

"The Brigade on setting out to-day will make no prisoners. All prisoners will be killed. The wounded, with or without arms, will be put to death. Prisoners even in large organized units will be put to death. No living man must remain in our rear."

(Signed) Brigadier General Stenger,
14th Baden Corps.

With plans such as this deliberately adopted, at the very outset, can we wonder at what followed? The bombing of hospitals, and the shelling of ambulances, the sinking of hospital ships and of life-boats filled with women and with the wounded, the sniping of stretcher bearers out on their Christ-like errands of mercy among the tangled wires in No-mans-land, and those other nameless horrors which would put a cave-man to the blush.

To resist such an enemy and to save civilization from such a fate, the call of our empire came.

It is my high honor to-night, to ask the Academy to accept from the Hospital Supplies Committee, a tablet recording the

names of those of our Fellows who were accepted for Overseas Service, and who did so serve.

Dr. King has fittingly spoken of those who

"Gave up the years to be
Of work and joy and that unhoped serene
That men call age" and
"Who will not come again,
To-morrow or to-morrow or to-morrow."

It remains for me to say to those for whose safe return our hearts are full of gratitude that we exult in the reply you made to the dear old land:—

"Mother, if fight you must
There are none of your sons on whom
You can lean with a surer trust,
Bone of your bone are we, and in death
Would be dust of your dust."

You went forth unquestioning and unafraid. You did not know your danger. No one knew it. No one dreamed of a conflict into which thirty millions of men would be drawn and from which ten million would never return. No one dreamed that from this conflict, another ten millions would come back as broken handicapped men to resume the struggle for existence.

I was long enough in the artillery service to know that non-combatants are sometimes looked upon as hardly sharing the real dangers of war. John McCrea, who was an officer in a field battery before he became a consultant in medicine, refers to this belief.

Now, it is all changed. In our last and greatest war, the medical corps, in proportion to the number engaged, suffered more severely than any other arm of the service. The reasons for this were complex. We had learned from the war between Japan and Russia, that the place of the doctor in any advance was with the cavalry patrol and the advance guard, to test and guard all water supply. We soon learned that with more and heavier guns engaged than ever before, the line of first relief must go forward and ever forward—into the shell zone of the heavies,—then into the range of the field guns,—forward to the fire step—and then up—and out—and beyond where under the glare of star-shells it dices with death.

The never-silent cannon took heavy toll while machine-guns and air-craft and poison gases from Hell's outposts in German laboratories swelled the grim total.

From such perils and from others I have not even hinted at, you have returned to us, and the Academy honors itself in honoring the sacrifices you made, and the good it was given you to accomplish. To say you did your duty seems cold and inadequate, but Mrs. Humphrey Ward has breathed life into that formal expression,—

"Never to tire, never to grow cold, to be valiant, sympathetic, tender, to look for the budding flower and the opening heart, to hope always, to love always, *this is duty.*"

Such was the service which you gave, and which the medical men of the Homeland and of our great Allies also gave. Once more it proved to us that simple duty has no place for fear.

Duty had no place for fear when the glorious 7th at Langemarck with odds against it seven to one, and while choked by stifling gas, from Friday night till Monday noon blocked the road to the Channel Ports and saved an army and a year of war. It had no place when that soldier from Ottawa threw himself on a live bomb and saved his trench-mates as he was blown to pieces. We know of deeds not less self-forgetful—deeds in which those we honor to-night had a part, but we are not talking about them just now.

The story of the work of our Fellows overseas and of the hardly less valuable work of those who were not privileged to cross the Atlantic, has never yet been fully told. It should be told, but we cannot trust its telling to those who know most about it. Let me prove this assertion. From a medical standpoint, the conquest of typhoid was our greatest victory. One of your number who had been in the thick of it came home and wrote a book trying to make us believe he had only been on the "Fringe of the Great Fight." Aeneas told Queen Dido of the things he had himself seen and of which he had been a principal part. Our Fellows are the victims of amnesia as soon as the tale becomes personal. Let me ask who changed the common army proportion of one death from injury to five from disease to one from disease as against ten or more from wounds. We want to fix the responsibility for such upsetting of all precedent. After long and bitter trial, reward came to you

as you watched the enemy lose first the offensive, then the hope of any permanently successful defensive. Then most glorious of all

"You saw the powers of darkness put to flight
You saw the morning break!"

Mr. President,—I fill my glass and lift it high and drink to the splendid seventy-fives that won The Marne, held Verdun, and saved France, to the long lean destroyers that gained us the victory at sea, to Dr. Widmer whose portrait looks down on us to-night, and who, under Wellington, in the Peninsula, helped to organize the world's first efficient Army Medical Service, and last of all, to our brothers who demonstrated the marvellous possibilities of such beneficent organization.

We congratulate the Academy upon its action in reference to those who served overseas, a number of whom made the supreme sacrifice. The bronze Tablet will make an exceedingly fitting Memorial to those men whose names appear thereon.

After the formal acceptance of the Memorial, by the Chairman, the Last Post was sounded, all present standing.

The balance of the programme consisted of the presentation to the Academy by Dr. J. Algernon Temple of an oil portrait presented to him by a number of his confreres and old associates. The portrait is undoubtedly one of the best that will hang upon the walls of the Auditorium. It is a speaking likeness of Dr. Temple and the Academy is to be congratulated upon receiving such a gift.

Dr. E. E. King presented a number of enlarged photographs of some well-known members of the

Profession who, during the past few years, have gone to their reward. These photographs will be properly framed and hung throughout the building.

A number of old and very valuable volumes were then presented by Dr. G. W. Ross and other Fellows.

* Toronto University Medical Affairs

A serious degree of unrest, dissatisfaction and complaint has arisen regarding the administration of affairs in the Medical Faculty of the University, and in the hospitals connected therewith, which the responsible authorities are unwise to overlook. This applies to not only the attitude of a considerable body of the general profession, but to many past and present members of the staff of clinical teachers. The case has in no wise been overstated in the criticisms appearing in the public press by prominent members of the profession, nor in the letters and editorials in the columns of our contemporary—The Canadian Practitioner. In the face of all this, the mere assurance of the President, in a department of special knowledge wherein he cannot be accepted as speaking with authority, that all is well, and that the state of affairs itself and the criticism directed against it may be lightly dismissed, do not indicate that he has grasped the seriousness of the situation. That the old Medical Faculty, which established the

* Since the above was set in type it is reported that Professor John T. Fotheringham has been asked to resume his teaching. This is a move in the right direction.—Ed.

reputation of Toronto as a medical centre, has been practically disintegrated, is a matter of common knowledge in University circles. The lapse of time naturally accounts for resignations or retirement, of some of those who have passed the statutory age limit, but it does not explain the secret dropping, or forced resignation of a number of widely known and experienced clinicians whose services merited grateful recognition by the University and hospitals they served faithfully for many years. That their replacement by younger and less experienced men has been in the interest of the University, certainly does not reflect the general opinion of the medical profession. It was done, apparently to pave the way for the introduction of the present system of organization. One of our valued contributors claims that this system "precludes fair competition, interferes with initiative, limits reasonable opportunities to a small number and carries with it little hope for present reward or future advancement for the large body of clinical teachers." It has been put in operation, he says, "not after full discussion of its merits, but as the results of conditions attached to gifts of individuals or bodies unfamiliar with, and therefore incapable of estimating the qualifications of those affected, without apparent regard or appreciation of the interests or rights of many prominent members of the staff. It is freely

stated to have been engineered by a small group of younger men whose motives, as their subsequent promotion suggests, do not appear to have been free from the bias of self-interest in the displacement of seniors. It is no unusual phenomenon for some younger men to overestimate their own qualifications and to deem themselves more competent than older and more experienced men, but fortunately it is seldom that this self-appraisement is accepted by responsible governing bodies. How long would any industrial, commercial, financial, ecclesiastical, political or journalistic enterprise survive the application of the principal implied by the action of the President and Board of Governors?"

The treatment of certain prominent military doctors has been strongly criticised. Some were retired immediately on their return from service—others at a little later date, thus increasing the sacrifice they had already voluntarily made in their country's service, and at the critical time when they were faced with the difficulty of regaining their practices. In some instances, in order to obviate the responsibility of demanding resignations or dismissing men, the questionable course has been adopted of allowing them to retain their professorships even with payment, but not giving them any work to do. Others, after years of service, have been obliged to give, for a merely nominal remuneration,

half their time to hospital practice, and in some instances to patients who neither were, nor considered themselves to be of the indigent class, but were, in fact the employees of large business houses. Recently many of the junior clinicians have been notified that their small remuneration had been discontinued in order to increase the salaries of the full-time (?) professors appointed under the new system. The Teutons are surely in danger of being out-Teutoned in this new sphere of Kultur.

The selection of a small group of the more experienced and fair-minded men from the Board of Governors, whose names and reputations would be a guarantee of a full impartial inquiry, which should be conducted by eminent counsel, is certainly called for to clear the atmosphere and restore confidence.

Heliotherapy in Surgical Tuberculosis

Dr. W. I. Harris, of the Dominion Orthopedic Hospital, discussed this subject at a recent meeting of the surgical section of the Toronto Academy of Medicine.

Three summers ago it was discovered that returned soldiers suffering from surgical tuberculosis at the Davisville Hospital were not improving under the usual measures, and the sunshine treatment was recommended It has since been carried out at the

Christie Street Hospital. A sheltered ward on the roof was provided. The results have been so gratifying that the ward has been extended. The patients remain under treatment both summer and winter.

Dr. Harris discussed the history of heliotherapy. Hippocrates mentioned the benefit of sunlight; but it was not until the 18th century that it began to be used medicinally. Toward the end of the century the French began to employ it in the cure of wounds and ulcers.

In 1845 Bonet, of Lyon, produced a treatise on joints, and spoke of the value of sunlight in white swelling of the knee. In 1859, Finsen began the study of the action of light in the treatment of lupus.. He believed that sunlight killed the tubercle bacillus in the superficial layers of the skin.

To Rollier belongs the popularizing of the treatment. His method is being tried out in Perrysburg, N. Y.

Heliotherapy gives the best results in surgical tuberculosis, though it is used in wounds and ulcers which are non-tuberculous. It is of doubtful value in pulmonary tuberculosis. Some hold that it is harmful. It is valuable in lupus.

Its value is due to the action of the violet and ultra-violet rays. These rays can be produced artificially by means of the arc lamp. In the type most

in use the electricity is passed through mercury and quartz. Whether these artificially produced rays will prove equal to sunlight, has not been decided.

Three phenomena have been observed—Erythema, pigmentation and vascular dilatation. Of the erythema there are two varieties: If there are abundant heat rays, these produce an immediate reddening of the skin, which persists during the exposure to them. After treatment this erythema does not persist and never reaches an extreme degree. The other erythema is due to the ultra-violet rays. After several hours of exposure it reddens the skin like an inflammatory action. This is the sunburn, well known to us all. It will produce conjunctivitis—reflected from the snow, this conjunctivitis is called snow-blindness.

Repeated exposures to light causes pigmentation. This is a protective mechanism against the ultra-violet rays. It varies greatly in intensity. Persons who pigment well do better than those who pigment poorly. The theory is that the pigment is an antibody capable of defending the body against organisms, but there is no certain basis for this theory.

During an epidemic of chickenpox, Rollier observed that pigmented patients escaped unscathed. Patients with casts showed pustules in the pigmented areas.

Finsen showed tubercle killed by sunlight. He treated lupus successfully; also acne and other skin eruptions.

Sunlight produces a dilitation of the capillaries. This persists for a long time—considerably longer than the pigmentation. The mechanism of this process is not known. It is this phenomena which is manifested in ruddy cheeks. Other factors, of course, take part.

It is difficult to understand how deep tissues can be affected by sunshine. The power of permeation of the rays is not great. A layer of skin 1 millimeter thick will stop all ultra-violet rays. Longer light rays have greater powers of penetration.

Sunshine affects the general metabolism of patients. During the period of treatment the phosphate content of the blood increases. Even with one arm exposed the patients rapidly put on weight. The appetite improves, and there is a marked sense of well-being, striking but difficult to define.

The cure of deep-seated affections must be through the improved metabolism. As large an area as possible of the patient's body is exposed, rather than the part that contains the tuberculous focus.

Dr. Harris reported forty cases. There were two classes: those in which the bones were affected, and those in which the soft tissues were involved.. There

were 36 cases in which the bones were involved. Twenty-three were cases of Pott's disease; five Pott's with other tubercle; four hip-joint cases; two tuberculous knee; and two sacro-iliac disease

Of the cases in which the soft tissues were affected, one had tuberculous peritonitis, one adenitis, one tuberculous kidney with cystitis. They were all treated in the same manner: rest, and affected parts fixed to prevent any movement. The Pott's cases were placed on Bradford frames for six months. The cervical and high thoracic Pott's cases had additional fixation by a halter and weight extension to head. The high thoracic and low lumbar had a spinal bone grafting done, owing to the difficulty of fixing these parts of the spine. The hip and face were fixed by plaster casts. Recumbency was enjoined on all. Foods rich in eggs and milk were advised and patients were encouraged to take as much nourishment as possible.

The exposure to the sunshine was commenced gradually—20-30 minutes the first day. Patients were stripped of all clothing except a loin cloth. Each day the time of exposure was lengthened 15 minutes until pigmentation was attained. The backs of the Pott's patients were exposed. Care was taken to maintain fixation of the tissues while the patients were being washed. During six months it was

too cold and stormy to expose the whole body. For five months complete exposure was possible. In Toronto the number of hours of sunshine is surprisingly high. During the past summer the average exposure was 1535 hours.

Certain precautions were necessary. In summer the heat from the gravel roof was tremendous. The patients' heads had to be shaded to prevent dizziness. They wore smoked glasses to present conjunctivitis. Electric fans were used. Abundance of fluid was administered. It was necessary at times to move patients into the shade. The patients, however, felt the heat less than the staff. There were minor heat strokes, but these were relieved by a few hours in the shade. In very hot days there were slight elevations of temperature. Certain patients showed idiosyncrasies. In one instance heliotherapy had to be abandoned. An hour's exposure produced a temperature of 103 degrees, with nausea.

Pigmentation disappears in cloudy weather. By June the patients were thoroughly tanned. They were given from 4 to 6 hours exposure each day.

As cure took place patients were allowed 30 minutes out of bed each day. They were carefully watched during convalescence, but the heliotherapy was continued.

Dr. Harris at the close of his paper presented a number of his patients in whom recovery had taken

place. These were examined by the Fellows of the Academy with great interest.

Dr. Harris illustrated his paper by slides showing the patients undergoing treatment, the wards and general environment.

Had it been possible the treatment would have been carried on in the heated spell on grassy lawns. There the patients do not suffer nearly so much from the heat rays.

It is to be hoped Dr. Harris' example will be followed in our children's hospitals where so many of the patients suffer from this form of tuberculosis.

Dr. B. E. Mackenzie used this treatment in his hospital 25 years ago with good results.

Forty years ago the late Prof. W. T. Aikens used to advise sun baths for tuberculous patients who consulted him.

A good many physicians and surgeons, for some poor reason, have been pooh-poohing heliotherapy. This form of treatment is here to stay.

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contributions

A RATIONAL PREPARATORY TREATMENT IN SURGERY

Charles H. Gilmour, M.B., M.R.C.S.,
Assistant Surgeon, Grace Hospital, Toronto.

During the war my attention was drawn to the fact that men suffering from abdominal wounds, and operated upon immediately after admission to hospital, and with no preparation whatever, with the exception of the routine dose of morphine given after injury, and often repeated, had remarkably little post operative nausea, and suffered but slight discomfort from gas distention. We all remember the astonishment we at first experienced on visiting the ward a few hours following operation, expecting to see our patient retching, straining, and vomiting, when to our delight, we found him lying in apparent comfort, smoking the ever present Player.

So much has been written regarding post operative treatment, that we feel the importance of preoperative treatment has been overlooked. The necessity for writing so much regarding post operative treatment would be lessened, if a proper preparatory treatment were carried out previous to the operation. Is it not a fact, that the old sinner routine is again to blame for the irrational, unscientific ordeal our patients are subjected to previous to operation? Is it not a fact that our patients are starved, purged and their rest disturbed until the wonder is that any recover?

Let us first consider the administration of Cathartics. The preoperative giving of a Cathartic is a pass-port to prelonged post operative suffering. The erroneous idea, that the giving of a Cathartic would remove all gas producing material, is still prevalent. The life history of the majority of bacteria is short, lasting but a

(Read before the Grace Hospital Clinical Society, November, 1921)

few hours. Before meals the small intestine is nearly if not quite sterile, and in the large bowel the bacteria are dying off rapidly, owing to autotoxic activity. The bacteria have a definite physiologic action, the fermentative decomposing carbohydrates, and the putrefactive type proteids. Starling and Bayliss have proven the presence in the intestinal tract of a substance they called secretin, which influenced the production of the other internal secretions, and which actually tends to prevent putrefaction. It is perfectly obvious that the use of cathartics by sweeping out this fighting force, would lessen the bowel defense.

Alvarez and Taylor at the Hooper Foundation for Medical Research, experimented with purgatives upon rabbits. The purgatives used were those in common hospital use, namely magnesium sulphate, castor oil, calomel and cascara. Of these magnesium sulphate was the most objectionable. The intestines of the animals purged by this drug were distended and full of fluid. The giving of a dose of castor oil showed a resulting irregularity, and slowing of rythme of the intestinal peristalsis. Calomel was formerly thought to be both a biliary stimulant and an efficient intestinal antiseptic. It has been shown to be neither; and in fact is harmful to the intestinal mucosa, and in favor of bacterial growth. Cascara did not appear to poison or fatigue the bowel. In animals which had been thoroughly purged, the bowels were injected and full of fluid and gas, and their contractions were weak and irregular, and they soon became fatigued.

To appreciate the bad effect of purgation, one has but to realize the miserable and depressed feeling after free purgation in a healthy individual. Why is it that the acute appendix, rushed to the hospital, and operated upon without any intestinal preparation has such an uneventful, comfortable convalescence, when the interval appendix who has undergone the careful routine preparation of purgation, starvation, elimination, and mental assassination, spends three days to a week of torture, resulting from his nausea, vomiting, distention, gas pains, thirst, urinary retention, and constipation?

The idea that the non-prepared bowel is distended, and in the operator's way, is not borne out. It is the carefully prepared bowel that has a congested appearance, is distended with gas, and is hard to pack off in abdominal cases. The non-purged bowel is pale, collapsed, and gives the operator no inconvenience. Also the presence

of semi-solid foecal content within the bowel tends to stimulate the peristalsis. The loss of this semi-solid matter with the congested bowel wall, and the depletion of the intestinal secretions and fluid results in a bowel hypotonicity, and this with the gas distention present, may result in a most operative ileus.

There is another important factor and that is the patient. Consider the loss of vital resistance and increased risk, in a patient weakened and in some cases almost bordering on collapse, as a result of the purgation discomfort, and loss of sleep the night previous to operation.

Chemical studies have shown that all the fluids of the body excepting the urine are alkaline, and that the blood, the spinal fluid, and the bile are persistently alkaline, and that the potential alkalinity of each is great, and that each has a high power of acid neutralization. Crile has proven by experiments on dogs, that nitrous exide, ether and chloroform during their administration all produce increased acidity of the blood. His experiments further proved the additional fact, that the acidity of the urine is increased markedly under ether and chloroform,—less under nitrous oxide. This finding has a most important significance for the surgeon, as it explains why the administration of the anaesthetic to a starved patient, may cause death by precipitating an impending acidosis. Acidosis means carbohydrate starvation. To prevent a possible acidosis a diet rich in carbohydrates and the drinking freely of an alkaline water is advised.

No surgeon would of choice operate on a patient weakened from starvation, yet by that old bugbear routine, we are apt to fall into the rut of starving our patients previous to operation. The customary diet taken up to the eve of operation, will keep up the strength, and a feeling of comfort and well being, and as Lincoln has shown, lessen the chances of acidosis, especially in children.

As a further means to combat the thirst that comes on after all abdominal operations, and to lessen the chances of shock or acidosis, the patient is directed to drink freely of alkalinized fluids for several days previous to operation. I have been in the habit of giving sod bicarb. gr. xv. and pot. bicarb gr. xv. in a glass of water every three hours for two days preceding operation. The attempt is made to render the urine alkaline, and keep it so until operation.

This so called alkalinization of patients by building up the alkali reserve of the body, greatly helps to lessen any chance of post-operative discomfort.

The patient upon whom we most dread to operate, is the one who is nervous and full of apprehension as to the outcome. We all appreciate how smooth is the convalescence of the patient, who has approached his operation, optimistic and full of confidence as to the result. It has been said that the patient who prior to his operation is convinced that he will die, usually does die. Crile has shown in his many articles on anociation, the damage to the brain cells produced by pre-operative fear. It is perfectly obvious, that to accomplish the most satisfactory results for our patients, and for ourselves, we must perfect a technic, that will exclude all unfavorable impressions and stimuli from the brain.

That this is successfully accomplished rests largely with the surgeon. The patient must have absolute confidence in the operator, and should enter the hospital with an absolute assurance as to a successful outcome. A cheery optimistic attitude on the part of the nursing staff, especially during the preparation of the operative field, will do much to lessen the patient's fear and dread. The strange surroundings and inevitable noise of a hospital are such as to cause a restless, sleepless night, with the result, the patient goes on the table tired, worn, and more or less shocked. To avoid this Veronal gr. X given at 9 p.m. will give the much needed rest.

That unfavorable stimuli to the brain cells immediately preceding operation may be avoided, we give morphine gr.¼ by hypodermic half hour previous to the operation. Of course this does not apply to children, or those known to have an idiosyncrasy to morphine. Following the morphine the patient enters the anaesthetic room with senses dulled, the induction of anaesthesia is easier, less anaesthetic is necessary, damage to the organs of the kinetic system is prevented, and the patient usually has a restful sleep for some hours following the operation. We feel that morphine should be given whenever it is deemed safe.

Allow me to say a word about the important psychic influence the anaesthetist may exert. He should at once in a subconscious way, give the patient a feeling of confidence. A few re-assuring words, and gentleness in commencing his induction, will do much

to mitigate the emotional factor in producing shock. Can you imagine anything worse, and more likely to damage the nerve cells, than an anaesthetist holding a mask tightly on the face, pouring on ether in a small stream, jerking up the jaw, and shouting at the patient to take long breaths.

To summarize our preparatory treatment:

(1) If the patient has regular daily bowel movements without aid, no cathartic is given. The morning of the operation a high simple enema is given. In rectal operations this is repeated until the fluid comes away clear. If the patient has been in the habit of taking a cathartic, the same may be allowed up to the second night preceding operation. The morning enema is always given.

(2) A liberal diet is given up to the night of operation, carbohydrates being urged and advised to eat sparingly of meat. If the operation is in the afternoon, a light breakfast is given.

(3) Alkalinized water is forced for 48 hours preceding operation, and consumed until two hours of operation.

(4) Veronel gr. X given the night before operation.

(5) Considerate, kindly treatment by all during the stay in hospital.

(6) Morphine preceding operation.

(7) Quiet gentle induction of anaesthetic.

I am firmly convinced that preparatory treatment of this type, will sepay the surgeon, by making the operation easier to perform, and will in all cases lessen and in many cases entirely prevent thirst, nausea, vomiting with distention or gas pains, and will alleviate much post operative distress and suffering, which at present is thought to be unavoidable.

MODIFICATIONS OF THE "SMITH INDIAN" OPERATION FOR CATARACT EXTRACTION

C. E. Hill, M.D., Toronto

We have been recently treated to an opportunity of seeing first hand the greatest exponent of intra-capsular operation and in an expert's hands, but we have not been given a chance to compare the same operator doing either the older capsulotomy operation or any of the newer modifications of the "Smith" oper-

ation which have been prompted by a desire to overcome at least in the minds of the modifiers the unnecessary dangers of delivering the lens by the "Smith" method. The truism so well spoken by Knapp as by many others that the aim of any extraction is to obtain the best vision with the least risk to the eye. As to the best treatment there is no doubt that the intra-capsular operation stands first. But as to the risk to the eye this point is open to question and I take it that this evening's programme was arranged to try and settle this point. One modification was prompted because the original "Smith" incision as described by Fisher, Vail, Knapp and Meding was a corneal incision which finished one to two mm. within the corneal tissue above instead of at the limbus or with a conjuctival flap. This incision as practiced by Smith frequently had delayed union, caused a little more astigmatism and was if anything more liable to infection. Let me digress a little to prove this statement. I recently read an article in Norris and Oliver that following a change in technique, in needling operations of entering the needle through the limbus or of picking up a piece of conjunctiva on the point of the needle before passing it into the anterior chamber that the infection had been practically eliminated whereas previously there was a decided menace to this operation. Taking the best known modifiers such as Dr. I. Barraquer of Barcelona, Spain, with his vacuum method called phacoerisis who by the use of the oscilations of this small vacuum instrument attached to the anterior lens surface, he successfully dislocates and extracts the lens in capsule. But this operation owing to the necessity of a very elaborate instrument and a very difficult technique is not open to us all to use as a routine and a recently published article does not entirely place this on a par with the older operations as far as safety is concerned. Another modification brought out by Dr. Fisher aimed at the reduction of pressure and the prevention of impaction of the lens at the upper margin of the incision by guiding it with a sharp needle during delivery. A further method brought out by Dr. Vehoeff who operated with a large incision with or without an iridectomy but he dislocated the lens by traction with his special forceps and delivered the lens by counter-pressure. He also added to his operation a conjunctival suture which was inserted prior to making the incision.

Dr. Torok modified this operation by making the usual incision with a small conjunctival flap, without a suture, and he dislocates the lens by the use of Kalt forceps and uses very little counter pressure in the delivery of the lens. Lastly, I might mention Knapp's modification which consists of a free corneal incision ending at the limbus and followed through with a conjunctival flap. Usually he does an iridectomy then dislocates the lens with the Kalt forceps and once the lens is free, he relaxes his hold and delivers the lens as in the old capsulotomy operation. By this method, if you fail to dislocate the lens, you have practically torn off the entire anterior capsule, thus making needling almost an unnecessary operation.

To sum up these modifications, it will be noticed that the changes were brought about to avoid vitreous loss and also to avoid a drawn-up pupil which is so common in the "Smith" operation. The changes in technique have been along the following lines, viz.:—

1. *Incision.*

Most modifiers preferring a limbus incision with a conjunctival flap, with or without conjunctival sutures, because they feel that the lens is delivered more readily, the wound heals quicker, and there is less danger of infection.

2. *The changes in the dislocation of the lens by traction.*

Because of the less liability to vitreous loss as exemplified by phacoerisis by Verhoeff, Torok and Knapp, and these procedures also reduce the danger of sub-choroidal hemorrhage and separation. The reduction in traumatism to the hyaloid system also minimized the thickening of this membrane and the necessity for further needling.

Read before Section of Ophtholmology Oto-Laryngology Academy of Medicine, November 14th, 1921.

UNIVERSITY OF TORONTO APPOINTMENTS

At a meeting held recently the Board of Governors of the University of Toronto made the following appointments to the staff:

FACULTY OF MEDICINE.

Department of Anatomy.

Assistants—Dr. F. W. Weston, Dr. R. O. Fisher, Dr. A. S. Lawson, Dr. E. E. Shouldice, Dr. K. G. McKenzie, Dr. H. B. VanWyck, Dr. Bruce Robertson, Dr. E. A. McCulloch, Dr. L. C. Palmer, Dr. P. D. Spohn, Dr. L. A. Pequegnat, Dr. H. W. Wookey.

Demonstrator—Dr. H. A. Gates.

Department of Obstetrics and Gynaecology.

Demonstrator—Dr. J. G. Gallie, Dr. Wm. A. Scott, Dr. R. W. Wesley, Dr. N. D. Frawley, Dr. W. W. Lailey.

Temporary Assistant—Dr. H. B. VanWyck.

Fellow—Dr. W. G. Cosbie.

Resident—Dr. D. M. Low.

Department of Therapeutics.

Demonstrators—Dr. S. Johnston, Dr. C. E. C. Cole.

Assistants—Dr. T. R. Hanley, Dr. M. D. McKichan, Dr. H. J. Shields, Dr. W. V. Watson, Dr. W. H. Carveth, Dr. C. H. Robson, Dr. J. J. Hurley.

Assistant to Dr. Detweiler, Special Research—Miss P. Denne.

Department of Surgery.

Full-time appointments—Dr. R. I. Harris, Dr. H. W. Wookey, Dr. J. C. McClelland, Dr. George Wilson.

Department of Pathological Chemistry.

Secretarial Assistant—Mrs. D. M. Palmer.

Department of Surgery.

Secretary and Stenographer—Miss G. B. Gauley.

Department of Clinical Surgery.

Assistants—Dr. R. Pearse, Dr. R. R. Graham, Dr. L. B. Robertson, Dr. C. H. Hair, Dr. C. B. Parker, Dr. H. E. Clutterbuck, Dr. G. C. McIntyre.

Temporary Assistants—Dr. T. A. Robinson, Dr. R. H. Thomas, Dr. H. A. Costan, Dr. A. B. LeMesurier, Dr. J. H. Wood, Dr. R. I. Harris, Dr. R. A. McComb, Dr. J. C. McClelland, Dr. E. E. Shouldice, Dr. H. W. Wookey, Dr. R. M. Janes, Dr. T. A. J. Duff.

Department of Clinical Surgery.

Demonstrators—Dr. M. H. V. Cameron, Dr. F. A. Cleland, Dr. R. E. Gaby, Dr. O. Mabee, Dr. A. H. Perfect, Dr. D. E. Robertson, Dr. N. S. Shenstone, Dr. G. E. Wilson, Dr. A. B. Wright.

Department of Ophthalmology.

Demonstrators—Dr. D. N. Maclennan, Dr. W. H. Lowry, Dr. W. W. Wright, Dr. F. A. Aylesworth, Dr. C. E. Hill and Dr. M. Lyon.

Dr. Herbert A. Bruce, Professor of Clinical Surgery.
Dr. W. L. Robinson, Lecturer Surgical Pathology.
Dr. Latchford, Laboratory Assistant Psychology.
Miss Gillett, Artist in Pathology.

GORGAS MEMORIAL INSTITUTE OF TROPICAL AND PREVENTIVE MEDICINE TO BE ESTABLISHED IN PANAMA

Of particularly deep interest to all members of the Medical Profession and to all others interested in questions of Public Health and Sanitation is the recent announcement of the plans of the Board of Directors of the Gorgas Memorial for the establishment of a Memorial Institution in the City of Panama for research and the extension of means of prevention of tropical diseases.

Anyone who has seen the old Panama at the time of the abandonment by the French of the work of the first canal, involving so much wasted energy, the loss of thousands of lives and some hundreds of millions of dollars, could not but be struck with the present aspect of Panama, its splendid sanitation, its beautiful cities, its five hospitals, and above all, by the completion of the Panama Canal itself, making Panama one of the most beautiful and salubrious spots in the world.

It is well known to members of the medical profession that the accomplishment of this great work and the sanitary regeneration of Panama are due to the efforts of the late William C. Gorgas, Surgeon General of the United States Army, and to his efforts, more than to any other, success for the work must be accredited.

Coupled with his earlier work in Cuba, the accomplishment of General Gorgas in conquering Yellow Fever and Malaria and conclusively demonstrating the fact that health, even in the tropics, is a purchasable commodity and has sent forth his fame throughout the world. Perhaps no single life has done more for the good and well being of humanity, and his great attachment for Panama has made the proposed Memorial to carry on the work he so ably started, the most practical tribute which could be conceived to his memory.

The honor for the conception of this idea and of bringing it into actual existence belongs to Dr. Belisario Porras, the President of the Republic of Panama, who in the name of his government has tendered the site, a building, and all required equipment, valued in all at approximately $500,000. At the request of Dr. Porras, Admiral Braisted, formerly Surgeon General of the United States Navy, with the co-operation of others equally interested in making this Memorial possible, incorporated the Gorgas Memorial Institute for the purpose, in addition to directing the scientific work, of raising an endowment fund of five million dollars for maintenance. The following officers and directors were elected:

President, Rear Admiral W. C. Braisted, U. S. Navy (retired).

Vice-President, Dr. Franklin Martin, Secretary General American College of Surgeons.

Directors: Dr. Belisario Porras, President of the Republic of Panama (founder); Dr. A. S. Boyd, Chief of Surgical Service, Santo Tomas Hospital, Panama; Surgeon General Hugh S. Cumming, United States Public Health Service; Surgeon General Merritt W. Ireland, United States Army; Honorable John Bassett Moore, Judge of the International Court of Justice, The League of Nations; Honorable Leo S. Rowe, Director General, Pan American Union; Surgeon General E. R. Stitt, United States Navy.

Dr. Richard P. Strong of Harvard University, chosen to head the Scientific Board, will be assisted by Admiral E. R. Stitt and Lieutenant Colonel J. F. Siler. Other members of the Scientific Board will be announced at an early date.

The Advisory Board, of which Secretary of State Hughes is Honorary Chairman, consists of the diplomatic representatives of all the Central and South American countries and representative committees of the leading national medical and surgical associations, public health groups, and many Southern Societies by which Gorgas was beloved.

The proposed Memorial will be built adjacent to the new two million dollar Santo Tomas Hospital, and the use of its complete facilities has been tendered the Gorgas Memorial to aid in the launching of the work.

The Memorial Building itself will consist of a dignified classic structure patterned after the lines of the Pan American Union in Washington, D. C. It will house the laboratories and provide facilities for the teaching of students from the various tropical countries and from our own leading schools of tropical medicine, such as Harvard, John Hopkins, and the University of California.

In commenting upon the field of work before the Institute, Admiral Braisted stated that among the diseases which will be studied in addition to Yellow fever and Malaria, are dengue, pellagra, beriberi, leprosy, cholera, and the various mycoses. It is the consensus of opinion that tremendous advances can and will be made through the efforts of the research work in this field.

The Tropics, which are so prolific in vegetation of every kind, have been equally fertile in the development of all types and kinds of dread diseases, which tended to make them unsuited and impossible of habitation until careful sanitation made them safe. They then can become the most desirable, the most attractive, and the most prosperous of abiding places . This very fact has made the City of Panama extremely desirable as a home for the work to be undertaken.

The humanitarian benefits to accrue from the establishment of this wonderful tribute to General Gorgas are almost beyond conception. Its complete success means the fulfillment of General Gorgas' greatest desire, that of eliminating these devastating tropical diseases, and at the same time is a fitting recognition of the worldwide importance that the Profession of Medicine played in the construction of the Panama Canal.

MEDICAL PRACTICE IN KOREA

Some slight idea of the work of the modern medical missionary, and of the terrible need for such a work that exists in the Far East, is frequently revealed in letters received at the headquarters of the various church missionary societies in the city. In a recent communication received at the Presbyterian offices from Dr. Stanley H. Martin, who is in charge of the Canadian Presbyterian Hospital in Yongjung Station, North Korea, many interesting and illuminating glimpses of the wonderful service rendered by the modern medical missionary are given.

Over the door of the main entrance to the hospital is a red cross worked out in stone, Dr. Martin states, and on the nearby flagstaff floats the Union Jack, which has several times recently been necessary to indicate that it is British property. Not only the church depends upon the hospital for medical aid, but the Chinese officials look to it for help in time of plague or other epidemic, and for the treatment of the many Chinese soldiers stationed in the district.

"If you cure me my son and I will believe in the Jesus doctrine," a dying Chinese farmer stated to Dr. Martin after he had been brought a distance of 150 miles to the hospital for treatment. "Who asked him to believe anything?" the doctor says in his letter, in relating some of the incidents in the daily life of the station. "I had asked him nothing, being concerned whether or not he could stand an operation; but it impressed me that this half-conscious man should realize that getting people to 'do the Jesus doctrine' was the work we were really trying to do. He was too far gone, however, to be saved, and when his friends took the body away, amid the sounds of exploding firecrackers, designed to drive away the evil spirits, I asked the son to believe in Jesus, and, in Chinese fashion, he bowed his head to the ground and went off crying.

"If you were to sit in the hospital any morning," he continues, "you would see a Chinese man carried in a basket suspended between two coolies who is suffering from a type of cancer. A Korean lad with glandular trouble has arrived after a journey of 100 miles. Next comes a woman riding on an old man's back. She had been stabbed by her drunken husband, and is partially paralyzed. A Chinese schoolboy follows with an injured scalp, covered with

chicken feathers to stop the bleeding. He is also covered by mud and filth, having been run over by a four-wheeled cart. The same lad a week later was hardly recognizable in clean pajamas resting in a clean bed in a sunny ward. He smiles his thanks from his one good eye. Several of the patients around him were reading a Chinese Gospel. Next comes a Chinese soldier, shot through the hip by a dancing girl at the end of a carousal

"There is a bright side as well as a dark one," continues the doctor. "An old man who had his foot removed because of a cancerous growth became a Christian. Returning home he sent in a letter, with 42 names attached, asking for someone to be sent to his village to start a church." Dr. Martin responded in person, followed by his Korean medical assistant and an ox-cart with medical supplies.

I found, as I approached the village where could be seen the ashes of 21 burnt houses, that the people were very unfriendly and would give me no information as to where the man who had his foot removed at the hospital lived. I suddenly realized that they took me for a Japanese spy and had to go on my way followed by wolfish dogs. I met an old man, however, whose son's leg had been cured in the hospital three years ago and he dropped his work and came out in the rain and led me all the way to my friend who came stumping out to meet me.

"That night, we, with the aid of a good lantern, showed them 50 pictures of the Life of Christ. They seemed to appreciate the scene before Pilate and also that showing where Christ was being beaten. Had not all these men been taken to Tutugo and flogged because they happened to be in the same village where one of the young men had dared to think of independence? Their houses and grain had been burned and in other ways they were able to sympathize with the Christ who suffered. The speaker had told them that Christ said he would rise from the dead in three days and you should have there there to see the faces of these heathen people when they saw the angels at the tomb telling the women of the Resurrection and then Christ on earth again among His people. This lantern show was held in a house at one end of which the family ox and donkey also live. These were tied outside and we hung the sheet on the stable wall.

"The next morning we held service. It had rained the night before, so the men were all busy at the very necessary weeding, but

the Sabbath was kept for the first time in that place, and these farmers, who knew nothing but spirit worship, dropped their hoes and came to the service. There were no hymn books or Bibles except ours, so the singing was a duet till my assitant became so flat that I allowed him to finish it as a solo.

"He preached on the subject 'Jesus,' and the old fellows, with their mourning caps and long pipes, listened most attentively, and with grunts of approval. There were 36 present and at the last prayer they all bowed their heads in deepest reverence. This is how our groups are started. When this man's foot was amputated his friends wanted to bury it, so that his body could be buried with it later, and he thus have a complete body in the next world. Now they know something of the resurrection of all because of this simple operation in a Christian hospital.

"This morning a blind girl baby was made to see as the result of two operations, and an eighteen-year-old boy was given a Pasteur injection for hydrophobia, which means that he will be rescued from a horrible death, as he had been severely bitten by a mad dog.

After six years of work in this one hospital the 5,000 patients have increased to 25,000 a year. In 1920 the daily clinic ran from 80 to 100 patients. Hundreds of operations were performed, nearly 2,000 visits made to the sick, and many thousands of Gospels and tracts distributed.—The Globe

"FULL-TIME MEN" AND GENERAL PRACTITIONERS

Medical education has reached a point where the status of practitioners in the medical schools should be defined. "Full-time men" are getting to be all the rage. In the few schools which can afford it, even younger instructors and associates are to an increasing extent men who have no private practice, who divide their time between laboratory, wards, dispensary, and classes. Obviously, with this assortment of activities, the full-time man's time is full indeed. He is working in a place where no test is too difficult to perform, no procedure too complicated to carry out. Instead of dealing with the heartaches and the thousand natural shocks of family life, he deals with patients who are under orders, with doc-

tors and nurses who have been trained and who have no other cares. He need not feel obliged to give medicine just for the sake of "doing something." In short, he is a relatively free agent who can spend all his time being scientific.

Now, so far as the students are concerned, this reacts most benefically. Students should see medicine at its best. They should be taught by men who have time to be investigators, who do not have to fight and harangue in order to get their directions carried out. From an educational point of view this arrangement is far better than that of taking the man with the largest practice and reputation, making him a teacher, having him rush from his practice to his classes, never giving sufficient time to his teaching, always giving the same lectures from year to year.

Are we, then, to do what we can to speed the extinction of the practitioner-teacher and bestow our favors upon the full-time man? This would clearly be bad policy unless we intend to make medicine altogether an institutional affair and eliminate private practice, an idea so impracticable that it deserves no sponsors. In the first place, the men who are selected for full-time teaching and research are, professionally speaking, practically all born in laboratories. Chemistry, bacteriology, and pathology figure so largely in medical teaching to-day that a man without some achievement *in vitro* had better not regard himself as suitable material for a full-time teacher. This being the case, the schools are running the risk of turning out men even worse equipped for private practice than they are now. Graduates will be likely to continue regarding diagnosis and pathology as be-all and end-all, and those measures practicable for the relief of those patients who are sick at home, with a busy, worried wife or mother for a nurse, will be foreign to them. However much the full-time man with a laboratory past may realize the limitations and demands of medicine practised in private homes, this man cannot give the student the point of view which one well-trained in private practice can give.

To supply this point of view we have our choice of requiring that full-time teachers shall have engaged in private practice for a period of years before entering upon their professional work, or of continuing to rely upon professors of clinical medicine or surgery, etc. Probably the latter alternative is to be preferred if the men chosen have not the kind of practice where quality of work is

sacrificed to quantity, in the interests of the exchequer. Far better use for purposes of clinical teaching the man who is "too good a doctor to make money"—in other words, the man who gives each patient such careful attention that he cannot have huge numbers of names in his appointment book. Diagnosis speed kings may do well enough financially, but they are not qualified to head students toward good medical work. Full-time men are indispensable to the best medical teaching. They should guide the teaching policies of their respective departments. But the instruction they give must be supplemented by the personal teaching of conscientious practitioners, who do more than anyone else to bring modern medicine into the homes.

MEDICAL SUPPLIES FOR SOVIET RUSSIA

Medical supplies, one of the greatest needs in the famine stricken and disease-ravaged provinces of Soviet Russia, which are being supplied by the American Red Cross and distributed by the American Relief Administration, are being shipped in increasing quantities from the European stocks of the Red Cross and from the United States. By the end of the year, Red Cross supplies valued at nearly $2,000,000 will have been sent into Soviet Russia to alleviate the suffering of tens of thousands.

Advices just received at Red Cross headquarters here from Dr. Henry in Russia, points out that typhus is prevalent in its most severe form and with the coming of winter will result in widespread and severe epidemics.

Malaria has been severe and is still prevalent in chronic form, Dr. Beeuwkes report continues. He also points out that typhoid fever and diseases of the skin and eyes and diseases directly traceable to the malnutrition general throughout the provinces are found in many instances. Constitutional diseases are severe and widespread.

"Drugs and hospital supplies are extremely scarce and satisfactory medical and surgical work is in consequence impossible. A leading surgeon in Simbirsk tells me that they draw thread from clothing to obtain suture material. Hospitals are congested and have long waiting lists," says Dr. Beeuwkes' report.

Outlining the medical work to be undertaken and the method of supply distribution, Dr. Beeuwkes says, "Present plans contemplate:

"The supply of existing hospitals and clinics with drugs and hospital supplies essential to their operation.

"The organization of clinics at food distributing centers in areas without medical facilities.

"Inauguration of measures to prevent and combat diseases in areas in which relief is undertaken.

"In order to combat typhus, we have in view the establishment of a large number of bath and disinfecting units to be installed and controlled by American personnel and operated by Russians. Installations will be simple and the cost low in comparison with the benefits they will render in areas badly infested and without bathing facilities."

Medicines, drugs, hospital supplies and equipment, hospital clothing and transportation facilities are included in the supplies now being sent by the American Red Cross into Soviet Russia.

DOCTORS IN THE HOUSE

Graduates of medicine of Toronto University in the House of Commons, are: Robert King Anderson, M.D., (Vic.) '88; Conservative, Halton County; first elected to the House of Commons in 1917; served as Mayor of Milton from 1904 till 1908; has always shown a great interest in public affairs.

Christopher Fraser Connolly, M.D., '11; Liberal; elected from Victoria, Alta.

John Carruthers, M.D., (Vic.) '88; Liberal; elected from Algoma.

Robert James Manion, M.D., C.M. (T) '04; Conservative; re-elected from Fort William; served with the military forces in France; was awarded the Military Cross at Vimy; author of "A Surgeon in Arms."

James Palmer Rankin, M.D., C.M., (T) '78; Liberal, North Perth; has represented North Perth since 1908; has practised his profession in Stratford since 1891.

Charles Sheard, M.D., C.M. (T.) '78; Conservative; Medical Health Officer for Toronto from 1893 till 1910; professor of Preventative Medicine, University of Toronto, 1906-1911; first elected to House of Commons in 1917.

DR. HILL'S SECOND RESIGNATION FROM THE MINNESOTA PUBLIC HEALTH ASSOCIATION

Dr. H. W. Hill, executive secretary of the Minnesota Public Health Association, has again resigned his position to accept work in the London, Ontario, public health department.

Dr. Hill is an exceedingly successful director of public health work, and a wizard in raising money; but he is not always wise in dealing with men not of his organization, but of another in like work.

The Minnesota Public Health Association has an unfortunate name, for it conveys an official suggestion not justified by the facts. It is a purely private organization and is no part of the State and shares no power conveyed by the State to its public health organizations. It has not scrupulously, at all times, avoided conflict with the State Board of Health, and not infrequently has embarrassed the Board in its work. We are sure the State Board of Health will always cheerfully co-operate with any and all private charitable organizations doing health work, but, very properly, it will not brook interference with its own official work imposed by law upon it.

We wish Dr. Hill great success in his work at London, and we should not regret to see him return to Minnesota, for we believe, if he returned, he would work in harmony with the other organizations, whether official or private, doing similar work in the state.

THE UNCONSCIOUS

The Editor of the Medical Press and Circular has this nugget in his particular department, at the Periphery, which should be memorized by those who are tempted to unduly emphasize phychoanalysis.

Within recent years we have heard a great deal about the "unconscious" and the part it plays in mental processes. I confess I have not found this doctrine so easy to accept as many have done. That the mind can go through a complex process of *reasoning* unconsciously I do not believe; while to speak of an unconscious *feeling* appears to me an abuse of terms, for when a feeling is robbed of all consciousness it ceases to be a feeling in the ordinary acceptation of the terms. That, however, a feeling may be unconscious in the sense of not being *cognised*—identified, analysed, and understood—is certain. Such are all the feelings of sub-human animals and young children, and many of the feelings even of educated men and women.

So far as I understand the following quotation from Mr. Bertrand Russell's recently published book *The Analysis of Mind*, the author uses the term unconscious, as applied to mind, in this second sense of not being cognised, rather than in the sense in which we speak of non-living matter as unconscious.

THACKERAY'S FAVORITE DOCTOR

Sir S. Squire Sprigge has published "Physic and Fiction" (Hodder and Stoughton, 12s. 6d.). It is an excellent subject and it is excellently handled. Sir Squire Sprigge has all the the qualifications for writing such a book, and he has an openness of mind and a sense of humor which place things in their proper position. I have been specially interested in an article on "The Medicine of Dickens." One physician was as much the physician of Dickens as of Thackeray, for both novelists have spoken of him with the warmest admiration, and Thackeray has dedicated "Pendennis" to him.

Dr. John Elliotson, the physician thus honored, had an extraordinary career. Previously I knew it only from the Dictionary of

National Biography, but Sir Squire Sprigge adds much to our knowledge of the subject. It seems to be admitted on all hands that Elliotson, about 1837, had established his position as one of the ablest thinkers among the physicians of the metropolis. He gave much of his time to mesmerism and phrenology, and held séances at his house, largely attended by the fashionable classes. He obtained results by practising on epileptic patients. There was trouble, and he was compelled to resign a professorship he held. But without doubt he attained for a time the foremost place among the eminent physicians of his time, and as late as 1849 he established a mesmeric hospital, at which numerous cures were said to have been effected.

So much for the Dictionary of National Biography. But Sir Squire Sprigge explains the great dramatic event which discredited Elliotson. He seems to have acted in perfect good faith throughout. As ill-luck would have it, he came across a certain Baron Dupotet, who had experimented in Paris with mesmerism, and obtained permission for him to make a trial of his methods of healing in the wards of University College Hospital. Baron Dupotet's claim was to relieve, and in some cases to cure, epilepsy by the production of the mesmeric slumber.

But, unfortunately, Dupotet was led to employ mediums of whose good faith he had no proper guarantee and to acquiesce in their pretended powers and revelations. Thomas Wakley, the editor of the *Lancet*, wrote in his paper demanding that the question whether two hysterical girls were honest and trustworthy should be thoroughly investigated. If these girls were genuine, well and good, but if not, what were Dupotet and Elliotson? Clearly dupes or rogues. Elliotson accepted the challenge with a willingness and alacrity which certainly vouched for his good faith. He offered to bring his mediums to Wakley's house in Bedford-square, and there to exhibit their powers of prophecy, transferred vision, clairvoyance and extraordinary susceptibility to certain metals and fluids. A performance was given at Bedford-square for the benefit of ten persons, five chosen by Wakley and five invited by Elliotson. A test was arranged under which their testimony broke down, and the whole business was denounced by Wakley in the *Lancet* as a pitiable delusion He did not reflect upon Elliotson's honesty, but declared it clear that Elliotson had omitted proper precautions, that his scientific experiments were parlor jugglery indifferently stage-

managed, and that he himself had imported into the matter a degree of personal interest which had unbalanced him and unfitted him for the responsible position of senior physician to the University College Hospital and teacher of medicine in the school.

This was a great blow, and practically compelled Elliotson to resign his appointments. But even after his breakdown Elliotson retained the confidence of a very large number of people, including such men as the two great Victorian novelists. "Pendennis" was dedicated to Elliotson in 1850. He went on with great energy, and the breath of slander never ventured to attack his personal character.

But what was apparently special to him was the practice of mesmerism. There is no evidence that he ever relaxed his belief in that, and he carried it on for years and met crowds of people of all classes. It seems as if this method is now discredited, at any rate as it took shape in Elliotson's work.

Obituary

THE LATE DR. J. A. HERSHEY

The funeral of the late Dr. Hershey, who was called out of this life a few weeks ago with solemn suddenness, was a deserved tribute to his personal worth, and the esteem and affection in which he has long been held, for his own sake, as well as for his work's sake, by all those who knew him well.

For the last 22 years he has filled a large place in the life and work of Owen Sound, and filled it well; with honor to homself and great advantage not only to his patients, but to the general public. A skilful and succesful doctor, with a large practise, he identified himself actively with every cause concerned with the general welfare of the people, taking a prominent part in municipal affairs, in political life, in philanthropic enterprises.

In the Presbyterian Church, of which he was a worthy member, he was also an honored Elder. In the Young Men's Christian Association he was an active and enthusiastic worker. Mainly through

his zeal and efforts it was resuscitated in 1917, when he was elected President and continued up till the present one of the staunchest friends of the organization and of all young men. In the Patriotic Association he was ever ready to promote in every way the welfare of the men who enlisted, and of their dependents, while the men were overseas. As chairman of the Relief Committee he rendered most valuable service in the administration of the Patriotic Fund.

While he lived he lived, filling the days as they passed with duty well done; shortening his days it may be by his tireless activity, yet probably accomplishing more in his less than three score years than most do who are spared to fill out their four score. "He liveth long who liveth well." Mere length of years is the poorest of all measures of life.

He will be greatly missed, and for long. Most of all, of course, in his home, where he was a devoted husband and father, where he spent most of his time when not on duty elsewhere. He will be missed in his church-home, where he was faithful in attendance, deeply interested in its worship, responsive to the appeals of the truth, and ready always to accept his full share of responsibility and service. He will be missed by his patients to whom his never failing brightness and cheeriness, as well as skill and sympathy, gave stimulus and hope, and helped them back to health and strength. He will be missed, even, by the man on the street. His always pleasant, if often hasty greeting did one good. He was always so hearty, so busy; it was scarcely possible to meet him without feeling a little of the influence of his intensity and activity. Diligent in business, fervent in spirit, having served his generation according to the will of God he was called in the end of a very full day into the rest of the endless day, of the higher life.

The manner of his going was most fitting. He died at his post. His last service was one characteristic of the man. On his way home from the Hospital, in the end of the afternoon, he passed two nurses on foot and invited them to ride. Chatting pleasantly with them, in the act of stopping his car to allow of their alighting, swiftly, silently, without word or sign, his life ended, as it had been lived, in doing what he could, for some one else, in the spirit of Him, who came not to be served but to serve, and to sacrifice.

—The Owen Sound Sun-Times.

DR. ALBERT FRALEIGH IS TAKEN BY DEATH

Dr. Albert J. Fraleigh, one of the best-known medical men in the Riverdale district, died on Nov. 26th at his home, 149 Broadview avenue, in his 46th year. He had been ill for some time.

Born at Bloomfield, Ont., he was educated at the Pickering High School, Belleville, Victoria College and the University of Toronto. He had a large practice. He was a member of the Masonic Order, the Royal Arch Masons, Geoffrey de St. Aldemar. Preceptory of Knights Templar and the Mystic Shriners.

JOSEPH MacDONALD, JR., M. D.
New York

It is with profound sorrow that we announce the sudden death, on January seventh, of Dr. Joseph MacDonald, Jr., of New York. He was born in Branchville, N. J., in 1870, and was graduated from the Medical Department of the University of Baltimore in 1904. He was connected for a time with the *International Journal of Surgery*, and in 1905 founded the *American Journal of Surgery* of which he was managing editor. He was a prominent Mason, being Past Grand Commander of the Knights Templar of New Jersey. During the war he served as Major in the Medical Corps of the U. S. Army, being actively engaged in securing volunteers for the medical service.

Dr. MacDonald was a member of the Medical Society of New Jersey, of the American Medical Association, and of the American Medical Editors' Association. He was for many years secretary of the last named society and served for one term as its president. He was always actively interested in this association and it was very largely through his enthusiasm and untiring labors that the society was built up into a strong organization with a large and active membership. He was personally known to every member and was popular with all, and his death leaves a void that will be hard to fill.

Dr. C. C. Field, one of Winnipeg's best-known physicians, died on January 29th, after a short illness from pneumonia. Dr. Field was a native of Cobourg.

Dr. A. B. Osborne, of Hamilton, Ont., who was quite well-known to the Profession as an eye specialist, died in England on January 29th. Dr. Osborne was fifty-nine years of age. The Doctor's health has been quite indifferent for some time past and he went to England in order to recuperate. The death of Dr. Osborne is a very distinct loss to the Medical Profession of the Province, as his skill had always been recognized. He was a son of the late William Osborne of Galt.

Personal

Dr. W. H. Pepler L.R.C.P. (Lond) 88 has been appointed by the University of Trinity College as its representative in the Council of the College of Physicians and Surgeons of Ontario.

ROCKEFELLER FELLOWSHIPS AWARDED TO CANADIANS.

Dr. Joseph A Baudoin, Assistant Secretary of the Superior Board of Health of the Province of Quebec, and Professor of Hygiene in the University of Montreal, has been awarded one of the fellowships for the study of medicine and public health in the United States, granted by the Rockefeller Foundation to promising medical men of various countries.

A fellowship has also been granted to Dr. Hubert D. Kitchen of Souris, Manitoba, for post-graduate study of internal medicine.

Last year the Rockefeller Foundation provided fellowships in public health and medical education for ninety individuals, representing thirteen different countries.

Dr. D. E. S. Wishart who has been pursuing post-graduate study in Oto-Laryngology in Boston since February, 1920, completed his 21 months of service in the Massachusetts Eye & Ear Infirmary on the first of February, and is now in Philadelphia taking Dr. Chevalier Jackson's special course in Bronchoscopy. After a short visit home he will proceed to England for further study under Drs. Turner and Fraser of Edinburgh.

PRINTER WAS PEEVED

Charley Harris, of Fort Worth, Texas, a friend of Mr. Nubbiners in the printing business, got slightly peeved at a letter from a doctor who wanted bids on several thousand letterheads, different sizes, different grades, and different colors, and wanted the printing form held standing. So Charley took his typewriter in hand and wrote:

"Am in the market for bids on one operation for appendicitis. One, two or five inch incision—with or without ether—also with or without nurse. If appendix is found to be sound, want quotations to include putting same back and cancelling order. If removed, successful bidder is expected to hold incision open for about sixty days, as I expect to be in the market for an operation for gallstones at that time, and want to save the extra cost of cutting."

RADIUM IN CANCER

In an article on the use of radium in carcinoma of the face, jaws and oral cavity in the Journal of Missouri State Medical Association, Dr. Ellis Fischel, of St. Louis concludes with the following summary:—

1. Radium can be relied on to heal carcinomatous ulcers of the face.
2. Radium is the most efficient method of treatment of carcinoma of the eye-lids.
3. Radium has replaced operative treatment of carcinoma of the lower lip in a large percentage of cases. Tributory glands should be removed by open operation.

4. The initial dose of radium should be the maximum one deemed necessary for the complete destruction of the carcinoma.

5. The persistent use of radiation after demonstrated failure of the growth to respond favorably is to be condemned

6. Radium has limited use in carcinoma of the jaws and buccal cavity.

7. As an adjunct to surgery, radium is probably of very great value, as its small bulk, diffuse and powerful action, permit it to be implanted in small cavities otherwise inaccessible to any method of approach.

THE LOUSE AND TYPHUS FEVER

The humble louse, whose annoying activities have been directly responsible for millions of cases of typhus and thousands of deaths in post-war Europe, is the subject of an interesting report just issued by American Red Cross headquarters here. The report describes the anti-typhus work done by the Red Cross during a very severe epidemic of typhus at Cattaro, Dalmatia, resulting in nearly 40 per cent. of deaths among Russian refugee patients there. The Red Cross sent a special corps of typhus specialists to the scene, under Dr. C. C. Yount of Pittsburgh and Dr. J. R. Ransom of Cleburne, Texas, and the epidemic was finally stamped out.

An interesting part of Dr. Ransom's report is devoted to describing the precautions taken to protect doctors and nurses engaged in the anti-typhus work.

"Protection of the personnel in the hospitals depends mainly on the efficiency of the disinfecting squad," writes Dr. Ransom. "Typhus is not directly infectious,—it can only be carried by the medium of the louse. Therefore if patients are properly disinfected there is absolutely no danger to the hospital personnel. In this respect typhus is similar to malaria. There is no danger from a patient with malaria, nor is there any danger from a patient with typhus.

"At our stations in Milina, or Cattaro Bay, every refugee was put through a delouser. All the hair was clipped close, and the patient was scrubbed thoroughly with soap and hot running water.

The body was anointed with kerosene or coal-oil. Clean pajamas were placed on the patient and he was wrapped in a clean blanket and transferred to his bed in the hospital. His clothes were put through a pressure steam sterilizer, and furs were put through a sulphur bath. In this way only louse free patients arrived at the hospital.

"Any person finding a louse on a patient or on the clothing of the personnel was required to report this immediately to the physician in charge of the hospital or to the chief nurse, at which time special steps were taken to discover from what source the louse came.

"It is seldom necessary for physicians or nurses to expose themselves by handling louse infected patients and articles of clothing, as there are always present persons who have had typhus, who can handle typhus patients and their clothing. The work of the physician and the nurse should be directing and not handling patients or articles of clothing. Too many over enthusiastic persons think they must demonstrate the fact that they are not afraid of typhus or of work. These people are penny wise and pound foolish. They are sure to be infected sooner or later and then their work must be done by someone else.

"In the field, where physicians and nurses are required to come in close contact with infected cases, it is important that they be provided with a combination undersuit of closely woven white cotton with stockings, long sleeves and a high collar. This garment should be worn just over the underclothing. Rubber boots or high laced boots must be worn to prevent the louse from crawling up from the floor.

"We have never insisted on the wearing of rubber gloves, as they are very bad for the skin if worn continuously, are clumsy if of the loose type, and are easily torn if made of thin material. I know of only one case in which an infection was produced by a bite on the hand.

"Woolens should be avoided, as the louse clings to such garments. Cotton and silk are best. I prefer a treach-coat as an outer garment. The material is of such texture that the louse cannot cling to it and is easily shaken off.

"At the completion of the day's work the outer garment should be taken off, shaken and hung up where it will not come in contact with other articles of clothing. A bath should be taken every night and all the clothing changed. To finish the bath the body should be sponged with a soapy water made of germicidal soap which should not be washed off. I have been using this soap ever since I began to work in typhus areas; and as I have caught several lice on my body and have never been bitten by one, I am convinced that the louse will not bite the skin recently washed with such a soap.

"One thing that must be remembered is that typhus is not as frequently conveyed by the bite of the louse as it is from the crushing of the louse and smearing of the body contents over the abrased skin. The natural instinct when one feels a bite is to scratch or rub the area through the clothes. This is just what must not be done, because this crushes the louse and smears its body contents. In Milina we carried a bottle of chloroform, and when we suspected the presence of a louse on the body or we felt a nibble, we simply covered the spot with the open mouth of the bottle and inverted it so as to saturate the clothes over the area with chloroform. In this way the louse, if present, was killed and we avoided the danger involved in crushing by scratching or rubbing. Not only does the chloroform kill the louse, but it neutralizes the virus in the bite."

LAMBTON MEDICAL ASSOCIATION ELECTS OFFICERS FOR 1922

At the annual meeting of the Lambton County Medical Association, held on February 9th, officers elected for the year were: President, Dr. W. R. Hamilton, Petrolea; Vice-President, Dr. William Reid, Wyoming; Secretary-Treasurer, Dr. Charles H. Smith, Petrolea. Dr. C. W. Sawyer of Watford, last year's President, presided.

Book Reviews

The Hope of the Future by Edward E. Eagle. Forewords and Messages by Honorable Warren Gamaliel Harding, President The United States of America; Honorable David Lloyd George, Prime Minister, Great Britain; Honorable Arthur Meighen, Prime Minister, Canada; Honorable William Morris Hughes, Prime Minister, Australia; Honorable William Massey, Prime Minister, New Zealand; Sir James Craig, Prime Minister, Northern Ireland. The Cornhill Publishing Company, Boston, Mass. Price $2.00.

After "five years of wandering up and down the earth," the author of this splendid book, in a firm belief that a little plain speaking is sometimes of value, gives his ideas of men and things general—those men who have not as yet reached the stage when they believe themselves immune from criticisms. His chapters, "Travels of an Average American," "The Education of an Englishman, "The Golden Calf," "The Future of Western Civilization," are well worth reading. Such a book cannot fail to bring about a better understanding between nations, particularly Canada and her neighbor to the south. The author proves his wide field of observation.

The Practice of Urology—A Surgical Treatise on Genito-Urinary Diseases including Syphilis, by CHARLES H. CHETWOOD, M.D., L.L.D., F.A.C.S., *Former Professor of Genito-Urinary Surgery*, New York Policlinic; Visiting Surgeon to Bellevue Hospital; Consulting Urologist, French Hospital; etc., etc. Profusely illustrated. Third edition. New York: William Wood & Company, 1921. Price $8.00.

The author gives a short general review of the established principles of urology. The medical treatment is well discussed and brief outlines of the more important operations included.

A well arranged and complete index provides easy referrence to any subject. There is an occasional misprint. The illustrations are excellent and to the point.

Rummyniscences by Frederick P. Kafka. With illustrations by Walt Lantz. The Cornhill Publishing Co., Boston. Price $1.50.

This is a book that will certainly help to while away an occassional winter leisure hour. It is full of humour, thoroughly amusing and very clever—Doctor, buy it—It will make you forget the worries of medical practice—for the time being.

A Lecture on Diseases of the Skin for advanced students and practitioners—by Henry W. Stelwagon, M.D., Ph.D., late Professor of Dermatology in the Jefferson Medical College; late consultant to the Dermatological Department of Philidelphia General Hospital; late member of the American Dermatalogical Association, etc., assisted by Henry Kennedy Gaskett, M.D., attending Dermatologist to Philadelphia General Hospital and member of the American Dermatological Association. Ninth edition, with 401 text illustrations and 29 colored and half-tone plates. Published by W. B. Saunders & Sons, Philadelphia and London. Canadian agents, The J. T. Hartz Co., Ltd., Toronto. The ninth edition of this well known and popular work on skin diseases was begun and planned in 1919 by Dr. Stelwagon. Owing to illness he was obliged to discontinue lecturing, and after his death the work of rewriting and editing the book was undertaken by Dr. Henry K. Gaskill, following along the lines laid down by Dr. Stelwagon.

The work has all its former fullness and thoroughness and has been enriched and amplified by the addition of new material and the rewriting of many chapters.

To allow of this addition without unduly enlarging the book the author his eliminated as much of the text as possible without detracting from the value of the book.

The work is most satisfying and will be found to set forth the latest advances in the pathology diagnosis and treatment of the various affections of the skin.

A Text Book of Surgical Anatomy by William Francis Campbell, A.B., M.D., F.A.C.S., Brooklyn, N. Y. Third edition, revised with 325 original illustrations. Philadelphia and London: The W. B. Saunders Co. 1921. Price $6.50 net. Canadian Agents: The J. F. Hartz Co., Limited, Toronto.

In the third edition of this book the Author and Publisher are to be congratulated on its excellence, both in appearance and the clearness in presenting the fundamentals in surgical anatomy. The main anatomic facts are tersely stated in a very readable form and are profusely illustrated by photos and drawings.

The chapters on the surgical anatomy of the extremities are exceptionally well illustrated with a brief description of the common surgical lesions found in each region.

In presenting the anatomy of the abdomen the author has endeavoured to impress upon the mind of the student the surgical significance of different organs by the use of catch phrases as calling the Appendix the "Abdominal tonsil" on account of the preponderance of lymphoid tissue and the pancreas the "Abdominal salivary gland." The clinical importance of the different regions is shown by a brief description of the more common surgical conditions found, and the anatomic facts presented with due regard to their surgical value.

The chapters on the eye, ear, nose and throat can be recommended to the Ophthalmologist and Rhinologist.

The book can be recommended as a valuable guide to surgeon and student.

Essentials of Laboratory Diagnosis, designed for students and practitioners, by Francis Ashley Faught, M.D. Containing eleven full-page plates (four in colors) and seventy-eight text illustrations. Seventh revised and enlarged edition. Philadelphia: The F. A. Davis Company, publishers. 1921. Price $4.50 net.

This book is largely practical in its subject matter and the field of laboratory diagnosis is covered in quite a comprehensive manner. The laboratory methods for the examination of the sputum, blood, faeces and urine are described in detail. The chapter devoted to

the determination of the functions of the stomach now include an account of the new fractional methods of gastric analysis, along with the interpretation of the various curves. Twenty-five pages are given to blood-pressure. This is well written and the author rightly emphasizes the importance of the estimation of the diastolic blood-pressure and the clinical interpretation of the pulse pressure.

A few of the more recent and elaborate laboratory methods are included and a chapter is given to the newer methods of blood examination, such as coagulation time of the blood, viscosity, non-protein and nitrogen and blood sugar, and the author expresses the hope that while these new methods require technical skill, consuming much time, they may still remain within the clinical dexterity of the average physician.

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CONTENTS

EDITORIAL

PAGE

Getting into Practice 143
Paying a Just Debt 144
The Swing of the Pendulum 147
Drugs 148
The Trend of Medical Education 151

ORIGINAL CONTRIBUTIONS

Disease among the Aborigines of America and their knowledge of Treatment, by W. Chapman Brown, M.D. 155
The Care of the Breasts Before and After Labor, by D'Arcy Frawley, M.D. 159

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The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

VOL. 51. TORONTO, APRIL, 1922 No. 4

Editorials

Getting Into Practise

Where to start and how are serious questions for every young graduate in medicine when the time arrives for him to hang out his shingle.

Shall he open out in city, town, country or frontier? That depends. As a rule, men gravitate to their proper sphere. There are a few exceptions. There are some square pegs in round holes. Some men fail in the first place they try and succeed in another. Some go from place to place, but never make a conspicuous success.

The qualities that make for success are many and varied. The quiet, cultured, refined, exclusive man may succeed in the city, but would be unlikely to succeed in our breezy west, where the hail-fellow well-met man who responds without affront to the name of "Doc" is likely to succeed. We postulate efficiency in both types.

In the city the road to success is a hard up-hill grind for most who wish to attain eminence.

Some of the gravest hindrances to success, according to the late Sir James Paget, are habitual idleness, the wasting of time, unbusinesslikeness, unpunctuality, incivility, and inability to work with others—faults, which singly or together, have spoiled the careers of not a few men whose knowledge might have brought them great success.

Our leaders, as a rule, possess medical knowledge, are careful of their health, economical of their time, punctual, industrious, kind to their patients and "the friends," candid and honest, careful and conscientious.

The successful man is likewise considerate of his fellow-practitioners. If a consultant, his success is much enhanced by the good opinion of his brethren. This good opinion is attained and maintained, according to Paget, if one behaves with scrupulous fairness to them, and, sometimes, even, with a sort of self-repression.

Paying a Just Debt

The Toronto Academy of Medicine together with provincial organizations should strongly endorse a resolution submitted to the Social Service Council of Canada at its annual meeting held in Winnipeg at the beginning of the year.

"That every pressure be brought to bear upon the Governments, Provincial and Federal, to the end that some co-operative scheme should be worked out by the two, whereby medical and nursing services might be supplied to outlying districts by bonusing a doctor to go into these districts under the direction of the Provincial Governments, so that there should be in each Province, at least as many representatives in the health and nursing services as there are to-day agricultural representatives."

This resolution should make special appeal to the governing bodies of our medical schools. These schools, under the aegis of whatever university, are supported in a small measure by the fees of the students but in a large degree by the provincial government,—which means by the taxpayers.

Every medical graduate owes a money debt to the State,—or more simply, to the citizens of the State. Every young doctor graduating from the Toronto medical school owes the people of Ontario, northern Ontario, as well as the closely settled southern portion,—all of whom have, by taxation contributed directly to the cost of his medical education.

Has the Province no claim on his after-service, by allotment of his field of work for a longer or shorter period after his graduation,—if the need of such service exist?

Our cities are crowded to the full with struggling young practitioners lured by the easier living; towns and larger villages have double and treble that the population require, while there are great stretches of sparsely settled territory in every province where from fifty to a hundred mile journey must be taken to reach a medical man. Canadian citizens have died, and are still dying in these newer places for the lack of a doctor whose education they have helped to pay.

It seems clear that the provincial government has a claim on the services of every newly graduated medical man. He should 'work out' the debt. It should be a point of honor that he should do so.

One or two years practice in the sparsely settled places, where the need is great; with no consultants or specialists to appeal to, would give the new practitioner poise, self-reliance, resource, and experience,—a self development that he could never otherwise acquire.

Let the government provide him with a bonus or guaranteed living wage, if need be; but let it make demand upon the student that he should work out the educational debt he owes to the people of the Province, by going out under the order of the government for a limited time and giving service where needed.

The Swing of The Pendulum

A fifth year medical student was heard to remark the other day that he could estimate the nitrogen in a specimen of urine, but was unable to attend to a boil.

Which reminds us of an eminent pediatrician in the United States who went off on a vacation, leaving a recent graduate to look after some of his work. The latter was consulted by a woman on behalf of her baby who had a swelling on its buttocks, presenting the classical symptoms—tumor, rubor, color and dolor. He introduced a hypodermic needle in order to make a bacteriological examination and a blood count, asking the lady to return next day.

That night the trouble became so acute that the mother sterilized a knitting needle, punctured the head of the boil, giving her offspring immediate relief. The young practitioner with his laboratory findings is still waiting for the mother and child to return.

Are our medical students learning the arts of medicine and surgery by doing the necessary things —learning to perform the operations they must perform when they get out in the country and working on their own responsibility, or are they devoting time to the study of history of civilization or listening to talk from certain uncultured men without

scholarship and no pedagogical training? Or are they getting an overdose of laboratory work?

Drugs

We wonder if the medical students of to-day are obliged (or supposed) to learn as much about the seeming never-ending list of drugs as we silver-haired fellows were obliged to know a good deal about thirty years ago. The long weary hours we plugged at materia medica and the long weary lectures on the subject are still green in our memory.

Dr. Oliver Wendell Holmes used to say: when a man opens practise he has twenty drugs for every disease; but, after twenty years practise he has one drug for twenty diseases.

When Benjamin Brodie, (afterwards Sir Benjamin and one of our great forerunners) began this study in London Town he served with Mr. Clifton, the apothecary. Brodie in his memoirs, says:—

"Mr. Clifton's treatment of diseases seemed to be very simple. He had in his shop five bottles. . . and it seemed to me that out of these five bottles he prescribed for two-thirds of his patients. I do not, however, set this down to his discredit, for I have observed that while young members of the medical profession generally deal in a great variety of remedies, they generally discard the greater number of

them as they grow older, until at last their treatment of disease becomes almost as simple as that of Esculapius, or Little Newport Street.

Both Holmes and Brodie were older and wiser men when they gave vent to these utterances than when they learned their materia medica as students. They had acquired some knowledge of the **Vis Medicatrix Naturae,** of which Brodie speaks so truly to his students:—

"What will happen in this case, if no remedies whatever be employed?" (Referring to a patient upon whom he was giving a clinic.) "The animal system is not like a clock or a steam engine, which, being broken, you must send to the clockmaker, or engineer to mend it; and which cannot be repaired otherwise. The living machine, unlike the works of human invention has the power of repairing itself; it contains within itself its own engineer, who for the most part requires no more than some very slight assistance at our hands. . . . When I tell you we are to trust to nature, I do not mean to say that we are to confide in her implicitly, but that our rôle should be not to disturb her operations without an adequate reason for so doing. When we know not what to do, it is better that we do nothing."

These words of a century ago are still worth pondering over by medical students, old and young.

The Way Out

To every man there comes a time when he must ease off on his medical activities in fairness to himself and to his patients.

This epoch in a doctor's life is a sort of climacteric. Varied are the ways of getting out of practise. Some retire willingly; others perforce. Happy is the man who has a competent son or an assistant who can gracefully drop into his chief's practise and carry on with equal success.

Announcement of declining health will have an untoward effect on practise. Rejection by the general practitioner of obstetric cases on account of failing strength will probably mean the loss of the families concerned.

Entering the political arena will estrange some of one's clientele.

Too much prosperity will work to man's disadvantage in certain respects. "We can't afford to pay such a wealthy man's fees," they may say, or, "he is too busy to go into my case thoroughly." Too many outside interests militate against a man's success. "Curtail" should be the watchword for the man over-busy in other affairs—public-spirited though he may be in them. The "lodge-man" loses cast and deserves too, though many men use lodge work at first to gain friends and acquaintances, and

to secure "the family." Becoming established they drop the lodge-work and, perhaps, later, frown upon it—"scorning the base degrees by which they did ascend."

Carelessness and inattention are damnatory. The man who in his initiation was taught to be cautious, should remain so until the end of the chapter. The men who retire gracefully and in good order are to be admired. To do so agreeably is better than to be forced out.

Let us learn how to let go.

The Trend of Medical Education

It has come to pass that the poor student who wishes to work his way through medicine in whole or in part is badly handicapped by the cost of tuition, board, etc., by the length of the course and the over-weighted curriculum.

Though the arguments in favor of the six year course are many, there is a strong feeling that the universities are over-doing the matter a bit—the pendulum is swinging to an extreme. Between three and four decades ago a man could graduate in three years. Now he requires about six.

With the closing of so many medical schools, as a result of the efforts of a big foundation and of the A.M.A., and with the higher standards introduced in

existing medical schools, fewer men are graduating —not enough to go round.

Canada and the United States are under supplied —to say nothing of China and India which probably have not more than one qualified doctor to a 100,000 of their population.

Many men with four-year training are now practising with great acceptance to the public. Such men are needed now by thousands in the foreign fields where disease is rampant.

Many of our frontier places would be glad of a four-year man. Many of our city slum areas could be manned by four-year men. They could do a great deal of the ordinary every day medical practise—the attending to the more common ailments. Being in a city, if any difficult problem in diagnosis should arise, in ten minutes they would be able to get a consultant or help from an older practitioner. These men could do the ordinary uncomplicated obstetric cases, more satisfactorily than the capable old country conduct them. I case of difficulty—as with the medical cases—skilled help is within easy reach.

As in the nursing profession it would appear that we might have nominally second grade doctors (as we have in reality) who would be the hewers of wood and carriers of water—four-year-men—with 6, 7 or 8 year men to do the super-work.

By Way of Explanation

In the March issue of the Journal an Editorial appeared entitled "Toronto University Medical Affairs." In justice to the members of our Editorial Staff, who are identified with the Medical Faculty of the University, we may state that the sentiments as expressed in the article are not concurred in by these gentlemen, who differ materially in their views regarding the recent Re-organization.

The Canadian Journal of Medicine and Surgery

Toronto ——— Canada

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Perry G. Goldsmith, C.B.E., M.D., Senior Assistant, Ear, Nose and Throat Department, Toronto General Hospital; **J. K. Milne Dickie, M.D., F.R.C.S., Edin., Ottawa.**

PEDIATRICS:

Augusta Stowe Gullen, M.D., Toronto; **Alan Canfield, M.D.,** Visiting Physician, Hospital for Sick Children, Toronto; **George Smith, B.A., M.B.,** Associate Physician, Hospital for Sick Children, Toronto. **Helen MacMurchy, M.D.,** Chief, Division of Child Welfare, Department of Health, Ottawa.

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OBSTETRICS:

J. Gordon Gallie, B.A., M.D., Assistant Department of Obstetrics and Gynecology, Toronto General Hospital.

PATHOLOGY:

J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, University of Toronto; **S. J. Streight, M.D.,** Toronto.

DERMATOLOGY:

D. King Smith, M.B., Clinician, Department of Dermatology, University of Toronto.

MANAGING EDITOR:

W. A. Young, M.D., L.R.C.P., Eng., Toronto.

Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

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Original Contribution

DISEASE AMONG THE ABORIGINES OF AMERICA AND THEIR KNOWLEDGE OF TREATMENT

BY W. CHAPMAN BROWN, M.D., TORONTO.

The explorers following in the wake of Columbus found, in the New World, races differing very widely in their degree of civilization. Cartier, sailing up the St. Lawrence in 1535, discovered communities of savages, who possessed few or no civilized customs. With crude implements of wood, or bone, the Indian women planted fields of maize and some vegetables. The men hunted, fished or waged war. Their dwellings were huge, but primitive structures, a framework of saplings covered with bark of cedar or elm. Each dwelling served to house sometimes as many as a score of families, who built their fires on the bare ground within, filling their windowless abodes with soot and smoke. Inside, was presented a scene of squalor, noise and confusion. Verminous dogs, unruly children, squaws and men mingled promiscuously.

A people so barbarous would not be expected to possess any medical knowledge except of the most rudimentary nature. Living, nevertheless, a life of the woods, and developing an acuity of sense in many respects extraordinary, it is not unlikely that they had acquired empirically some skill in treatment. The relations of the Jesuit missionaries make numerous references to native cures, many of these passages showing considerable credulity on the part of the churchmen and reflecting the imperfect state of European medical knowledge at that time. Living, however, among the Indians, they preserve for us a first-hand picture of conditions prevailing in their villages.

Amidst the squalor of their many-familied houses, tuberculosis was rampant. Inflamation of the eyes, frequently attended in old age with blindness, was common, and was attributed by the Jesuits to the smoke of their dwellings. No doubt, the picture presented

was a complex one, the result of a variety of causes. The squalid congestion of their houses, their licentious habits, their orgies of overeating alternating with periods of famine were conducive to disease and favored the spread of infection. Dysentery was prevalent during the autumn months, the natives often blaming the food sold them by the French traders for their illness.

Female life among the natives had no redeeming side. Their lives were passed in unceasing drudgery following a youth of licence. Their confinements are said to have been of shorter duration and less painful than in the case of civilized women, but the Indian was accustomed to be stoical under suffering. They considered it a disgrace to show any sign of pain. They were often up and at work a few hours after delivery. At the time of her menses, the Indian woman was given a tent apart, as she was then believed to be infectious.

In the treatment of disease, the Indian seldom reasoned from cause to effect. In fact, so far as the automins or medicine-men were concerned, treatment was so grotesquely interwoven with heathen superstition as to be in no sense rational. Sometimes, on the other hand, their treatment showed a glimmering perception of physiological laws and were a little startling.

One day, Le Jeune, the Jesuit missionary, was engaged writing when an Indian woman, who was standing by his side, suddenly seized his penknife and made several cuts in her forehead. Le Jeune, surprised, asked her why she had done this, and she replied that she had a headache and wanted to cure it.

It was to an Indian cure that Cartier attributed the recovery of his sailors from a malignant outbreak of scurvy, when complete annihilation of his crew seemed inevitable. They were wintering on the St. Charles River. Near by, was the squalid native village of Stadaconé, and among the inhabitants the disease was widespread. It broke out among the sailors. Hemmed in by the winter drifts, in the rugged, pine-clad wilderness they lay prostrate. Half the crew had died of the loathsome disease and the survivors, too weak to break the frozen ground, buried their dead comrades in the snow. One day, their commander was surprised to meet an Indian, who a very short time before had been badly afflicted with the disease, now apparently well. Eagerly, he asked how he had been cured, and was told that he had healed himself with a drink made from the branches of a tree called by the Indian the "ameda".

The stricken sailors tried the remedy and found themselves improved. The prospect of recovery threw them into transports of joy. They fought for the medicine and in a few days, says the chronologer, used up a tree as big as "any oake in France." The "ameda" is thought to have been a spruce or cedar, from which pioneers of Upper Canada, according to Mrs. Simcoe and others, were accustomed to make substitutes for tea.

These northern tribes ,however, did not represent the highest civilization of aboriginal America. Years before the appearance of Cartier's sails on the St. Lawrence, the ruthless soldiers of Cortez and Pizarro were blotting out much more cultured races in Mexico and Peru. These, in spite of many national traits of barbarism rivaled in some of the civilized arts, the advanced nations of Europe. How did they compare with European nations along the lines of medical science?

In Europe, by the middle of the seventeenth century, medical knowledge had advanced little beyond the times of Hippocrates and Galen. The studies of anatomy, botony and pharmacology were only beginning to influence its practice. Chemists were still groping for a universal principle. Harvey's enunciation of the circulation of the blood in 1628 for years had little significance. Doctors still talked of the humours of the blood, and the influence of the heavenly bodies in health and disease. Boyle and Newton believed in alchemy. John Wesley cured cramps by laying a roll of brimstone under his pillow. Yet a century before the time of Boyle and Newton, two centuries before that of Wesley, according to the testimony of reputed historians, Mexico already had established "in her principal cities, hospitals for the cure of the sick and as a permanent refuge for disabled soldiers." Over these were appointed surgeons who in the words of the chronologer "were so much better than those of Europe that they did not prolong the cure in order to increase the pay".

Much interest has attached to the civilization of Peru. In 1897, Muñiz and Mcgee described a collection of skulls they had made from old burial houses, relics of the Indian civilization. More recently, Hrdlicka has carried on further research work along similar lines. An interesting feature in regard to these ancient skulls is the fact that a large number of them had been trepanned. It is known that barbarian races from prehistoric times have practiced trepanation on the living subject. The custom is known to have prevailed

among the South Sea Islanders, who sometimes covered the opening with a carefully prepared piece of cocoanut shell. As practiced by such barbarians, the operation had no rational purpose. It was a sort of magic medicine done by conjurers much as the Huron autmoin would slash the body of a sick Indian and pretend to extract some hidden object placed there by witchcraft. Was this the nature of the operations shown to have been performed on the ancient Peruvian skulls?

In the case of the Peruvian skulls, reparative changes in many indicated that the operation was an antemortem one. But were the operations the application of scientific knowledge? Muñiz says that where a skull showed trepanation as well as local injury these seldom coincided in position. Hrdlicka, on the contrary, declares that many specimens show conclusively that the purpose of the operator was to correct local defect and that in many cases the operation was successful. In many instances, the work was, he says, crudely performed, but in others very skilfully.

The skeletons examined showed an average stature and a much smaller percentage of pathological lesions than would obtain in the postmortem findings of a white population. Dental caries was conspicuously rare.

Muñiz says that the Peruvians possessed advanced medical and surgical knowledge, that they knew how to reduce luxation effectively, and employed fixation to consolidate fractures, sometimes having recourse to massage. They knew, he claims, the danger of free exposure of wounds to the air, and that they could diagnose rheumatism, syphilis, ague, cerebral disturbance, and other ailments. They practiced phlebotomy and excised pterygiums. On the other hand they are said to have shown considerable ignorance of physiology, and much of their surgery was crude. Strange to say, the Peruvians, though utilizing a great variety of medicinal plants, appear to have been unacquainted with the virtues of the cinchona bark. Many of their cures were particularly revolting, and it is difficult to reconcile the charlatanism of many of these as described by their historian, Garcilaso, with advanced skill along surgical or medical lines.

THE CARE OF THE BREASTS BEFORE AND AFTER LABOR

D'Arcy Frawley, M.D., Toronto.

There is no need to emphasize the necessity for the careful management of the breasts during lactation because the obstetrician must assume the same responsibility as the surgeon does for his post-operative treatment and not merely trust to a nurse who is often ill-trained for her duties.

I intend only to briefly outline the usual care given to our patients in the obstetrical department at St. Michaels Hospital. During the latter part of pregnancy the patient is advised to wash the nipples daily, using castile soap and water, then dry them well and apply cocoa butter, boracic ointment or some such similar application to make them soft and pliable. Alcohol or alcohol and borax are not advised for fear of hardening the nipples, and predisposing to cracks during lactation. A light support for the breasts adds to the comfort of the patient, especially if the breasts are pendulous.

Shortly after delivery the nipples are cleansed and disinfected, the breasts being supported by a light binder. Before and after nursing, the nipples are cleansed with boracic acid applied by means of sterile applicators; after nursing, the nipples are carefully dried and protected by a sterile dressing.

To protect the nipples from unnecessary traumatism and maceration of its epithelium, the babe should not be left too long at the breast; the first day, it is nursed every eight hours for five minutes; the second day every six hours and the third day every four hours. No babe is left at the breast longer than 20 minutes.

Should it be necessary to feed the babe before the breasts are functioning properly, it is fed after being put to the breast, in order that its attempts at nursing will not diminish.

Engorged breasts are treated, if necessary, with a tight binder, administration of a saline cathartic, and a limitation of fluids; severe pain may be relieved by ice-bags applied outside the binder or by hot fomentations; a breast pump or massage is seldom used. When massage is applied, the fact that the swelling, tenderness, etc., are largely due to venoms and lymphatic stasis must be remembered and pressure applied to express the blood and lymph from the nipple towards the penphery. Drugs are not used locally or internally.

For sore nipples, due to erosions, blisters or cracks, special aseptic and antiseptic measures must be taken to promote healing and prevent mastitis. A glass shield is ordered for nursing; the nipples are cleansed with hydrogen peroxide and dried, then one of the many applications may be used, such as compound tincture of benzoin, 2% silver nitrate applied twice daily, 50% alcohol compresses for one hour, applied three times daily, a paste of castor oil with bismuth, etc. The use of the lead shields between nursings is a favorite with some, while others prefer to expose the nipples to the air, protecting them with an apparatus fashioned after an ordinary wire tea-strainer.

If definite improvement of the nipples is not soon apparent, temporary cessation of nursing is required. Occasionally these local conditions, especially if associated with flat nipples and scanty secretion, may prove so obstinate, that the babe must be weaned, if mastitis is to be avoided.

Attempts made during pregnancy to draw out retracted nipples have always proved a disappointment to me, but efforts made, after labour, with aseptic fingers, plus the nursing of a vigorous child, properly applied to the breasts, are often very gratifying.

At the first signs of mastitis, breast feeding is discontinued, and ice-caps applied: breast feeding is resumed as soon as conditions are normal.

For breast abscess, unless it is small and subcutaneous, a general anaesthetic is given and by incisions radiating from the nipple all pockets are thoroughly explored and then drained with tubes.

For breasts with deficient secretion, in addition to general hygienic and dietetic measures, we attempt to stimulate the glands, twice daily, by gentle massage and sponging, alternately with cold and hot water followed by gentle friction with a coarse towel. But the best stimulus is, of course, the vigorous nursing of a healthy child, and in a hospital it is often possible to use such a child when the mother's own babe is weak or premature.

When it is necessary to dry up the breasts, as after a still birth, the measures described for simple engorgement are used; the tight binder being applied soon after delivery as it is easier to prevent the distention of the breasts than to cure it.

Read before Section of Obst. and Gynoecology Academy of Medicine, Toronto, November 3, 1921.

Selected Articles

ANAESTHESIA IN TONSIL AND ADENOID OPERATIONS

By Courtenay Yorke, M.D., Liverpool
M.B., B.S. Lond., F.R.C.S. Eng.,
Honorary Aurist and Laryngologist to Liverpool Stanley Hospital, Etc.

The purpose of this note is to advocate the use of nitrous oxide or local anaesthesia, in preference to ether and chloroform, in the removal of tonsils and adenoids. In children below the age of 14 or so the operation can always be efficiently performed under gas. In adults the same is true where adenoids only require removal; if in them tonsils are to be enucleated, some can be dealt with under gas, but the majority must be dissected out, and for such a procedure gas is not suitable. A more prolonged anaesthesia is necessary, and it is in these cases that I strongly recommend local anaesthesia rather than ether or chloroform.

In stating the grounds on which the discontinuance, as far as possible, of the use of ether and chloroform for tonsil and adenoid work is urged, it will be convenient to consider separately the case of children and adults.

1. *Operations in Children*

Anyone who has had considerable experience in removing tonsils and adenoids in children knows that, with a guillotine of suitable size and form, enucleation of the tonsils can be easily and rapidly performed, while with a sharp curette the adenoids can be removed with one clean sweep.

Nitrous anaesthesia affords ample time for completion of the operation, if the following method is adopted:

The child lies on the back, with the head extended over the end of the table. The operator stands immediately behind the head, while the anaesthetist places himself on one side of the table and a nurse on the other. A strap above the knees secures the legs, while

the arms are held by the nurse. Just before commencing the anaesthetic a scissor gag is introduced, but only slightly opened, so as to cause no alarm. As the child goes under the gas the gag is fully opened, and when the anaesthesia is complete the anaesthetist puts the facepiece on one side and securely holds the head in a well-extended position. The tonsils are first dealt with and enucleated by a modification of Sluder's method. In this procedure the tongue is depressed with a spatula and the lower tonsil pole is then engaged in the ring, and the whole organ drawn upwards and forwards against a tubercle on the lower jaw, just behind the last molar tooth. By dint of trong pressure of the guillotine, combined with manipulatory movements, the aforementioned tubercle is made to forcibly thrust the tonsil through the ring of the instrument.

It is, of course, understood that a size of ring has been chosen which is large enough to allow the upper tonsil pole to pass through with a moderate degree of ease. It is the upper pole of the tonsil which is most likely to be left behind if the pressure and manipulation are inadequate. The method of finger pressure advocated by Whillis and Pybus takes longer, and in my experience is no more efficient. The method described is competent to deal with any case, unless the adhesions to the faucial pillars and peritonsillar tissues are such as to prevent evagination of the tonsil. After the enucleation of the tonsils the adenoids are removed. The whole operation does not occupy more than twenty seconds. The position of the head allows the blood to gravitate away from the larynx, and on turning the head to one side at the conclusion of the operation the blood flows out of the mouth. The child is made to sit up almost immediately, and will cough or spit out the blood instead of swallowing or inspiring it. The return to consciousness, together with the upright posture, arrests the haemorrhage directly and the child can be safely returned to its home within an hour.

The whole proceeding is simple and safe, and free from any anxiety. Haemorrhage is reduced to a minimum, and the child is fit and well again in a very short time. The one untoward circumstance that may arise is a sudden cessation of breathing from overgagging, but if the cause be recognized the trouble can be rectified in a moment by easing the gag. In my opinion overgagging as a cause of asphyxia in young children is not sufficiently recognized and taught.

The foregoing remarks concerning the use of gas in tonsil and adenoid operations require qualifying in this very important respect, that the best results can only be obtained with "team" work. The anaesthetist must be skilled in the administration of gas, and must understand exactly how to hold the head and assist the operator. An experienced nurse is also invaluable.

To instance the safety of tonsil and adenoid operations under gas I should like to refer to the statistics of school children operated on by me during three years for the Education Committees of Liverpool, Bootle, and Southport. These statistics have not been worked out by myself, but have been furnished me by those responsible for the care of the children after the operation.

Altogether 3,577 children have been operated on with no fatalities, immediate or subsequent, and no recurrences. In 25 cases only (considerably under 1 per cent.) has severe bleeding, occurred, that is, bleeding sufficient to cause faintness and collapse.

When I review all my work during the past eight year I must certainly have operated on upwards of 6,000 children under gas, and I have never experienced any fatal case, either at the time or subsequently. Of course, I am well aware that very striking statistics have been published of series of cases in which the major anaesthetics had been used, but, broadly speaking, I am convinced that with ether and chloroform anaesthesia, especially the latter, there is much greater risk, firstly of collapse under the anaesthetic, secondly, of serious haemorrhage, and thirdly, of pulmonary, middle-ear, and other complications. Deaths during tonsil and adenoid operations have occurred far too frequently in the past. An analysis of 700 inquests on anaesthesia deaths appeared in the *Proceedings* of the Royal Society of Medicine some years ago, and out of that number no fewer than 56 were in cases of tonsils and adenoids.

With regard to haemorrhage, in my experience there is usually a much greater loss of blood under ether anaesthesia than with itrous oxide, and that, I think, is just what one would expect. Under ether a child continuous unconscious for a considerable time. The head is low, the vessels are all relaxed, and the bleeding is further aggravated by retching and vomiting. Even with the most careful swabbing of the tonsil beds it is inevitable that blood must be swallowed and inspired. Firm pressure with a swab, after the

removal of one tonsil, will certainly momentarily arrest the bleeding, but it is not feasible to continue this pressure since the other tonsil as well as the adenoids, are waiting to be done and the child is rapidly coming out of the anaesthetic. The secret of the small loss of blood with gas is the speed with which the patient recovers consciousness and can be placed in the sitting position. Cold sponging of the face is a useful adjunct in arresting haemorrhage. I have never once had to have recourse to stitching the faucial pillars together or tying a bleeding point, and the use of a temporary clamp has been extremely rare. Should haemorrhage be severe it can nearly always be adequately dealt with by pressure with an adrenalin swab applied at the end of a forceps, or, better still, pressed to the bleeding spot by the point of the finger, counter-pressure being kept up for some minutes by the finger-tips of the other hand placed just behind the angle of the jaw. Morphine is a most valuable aid in any case of persisting haemorrhage.

Concerning other risks in tonsil and adenoid operations, no one, I think, will deny that they are greater with a major anaesthetic. The swallowing or inspiring of blood, the malaise and sickness, and the general lowered vitality which follows ether or chloroform administration, render pulmonary, middle-ear, and general infective conditions much more frequent than with nitrous oxide.

2. *Operations in Adults*

The scope of local anaesthesia for tonsil operations is naturally restricted to adults, and its use is indicated wherever the embedded position or adherent character of the tonsil renders the operation of dissection necessary. The advantages of local anaesthesia in these cases are enormous. Under ether the dissecting out of adherent tonsils in a adult is a difficult and often anxious operation. Very deep anaesthesia is necessary to abolish the throat reflexes, the tongue requires to be retracted well forward, and good artificial light must be used. The work of the operator is greatly hampered by haemorrhage and salivation and the need for frequent swabbing, and also by the rapidity with which the throat reflexes return, necessitating a further does of anaesthetic. Considerable haemorrhage is common, and the patient not infrequently suffers from severe malaise and prostration for several days after operation.

With local anaesthesia, however, the state of things is quite different. The patient sits in front of the operator. The tongue

lies quietly in the floor of the mouth and need hardly be touched. The operation can be conducted quietly and deliberately, and may be frequently interrupted to allow the blood to be expelled. With suitable technique haemorrhage is usually slight and pain hardly present. Should the bleeding be free it can be most easily controlled, and, if thought advisable, the second tonsil left to another occasion.

Very briefly, the various steps in the removal of tonsils by dissection, under local anaesthesia, are as follows:

1. A preliminary injection of ½ grain of morphine and one-hundredth grain of atropine is useful in nervous patients.

2. The fauces, soft palate, and pharyngeal wall are swabbed several times with a 10 per cent. solution of cocaine.

3. A 2 per cent. novocain solution (containing 5 minims of adrenalin to 1 drachm of novocain) is injected into both pillars of the fauces and deeply into the junction of the lower pole of the tonsil with the tongue. The injection into the anterior faucial pillar is the most important one. It must be made just beneath the mucous membrane, and the fluid must be seen to diffuse widely, causing a raised anaemic area the size of a shilling. The posterior faucial pillar is so thin and mobile that injection into it is often difficult.

4. The upper pole of the tonsil is seized with tenaculum forceps and pulled inwards.

5. By means of a pair of scissors, curved on the flat, the upper pole of the tonsil is exposed by snipping through the mucous membrane covering it. This is the most important step in the operation.

It is vitally necessary that the mucous membrane only be divided, since, if the wound be carried too deeply into the tonsillar substance, the capsule is missed and the operation is apt to degenerate into a mere tearing through the grandular tissue.

6. The capsule of the tonsil having been laid bare it is comparatively easy to free the whole of the upper pole and deliver it from between the faucial pillars.

7. The upper pole is now seized with the tenaculum forceps, the tonsil dragged inwards, and the dissection carried downwards to the lower pole—still using no other instrument than the curved scissors, which serve both for cutting and blunt dissecting.

8. The operation is completed by cutting through the lingual attachment of the tonsil with the guillotine.

9. Bleeding is easily checked by means of gentle pressure with an adrenalin swab. Any bleeding vessel ca be temporarily clamped.

10. The tonsil bed is swabbed out with Whitehead's varnish, which acts both as a styptic and antiseptic.

I have endeavoured to illustrate, by the accompanying drawings, the salient points in the above description, and, in conclusion, confidently assert that in adults the operation for the removal of tonsils by dissection is easily feasible under local anaesthesia, while the avoidance of ether and chloroform for the purpose confers very great advantages on both patient and surgeon.—British Medical Journal.

BOTULISM

Dr. Norman E. Culbertson, of Dawson, Yukon, M.O.H. for that territory, writes in respect to the outbreak of botulism in one of the camps near the capital city: "Being unaware of any previously established cases of botulism in Canada, you may be interested to learn something of our unfortunate experience last May. On the 22nd at one of the Yukon Gold Company's camps, thirty-eight men, including the dredge superintendent and the company's physician, took their mid-day meal to-gether. No one reported ill for over twenty-four hours, when the superintendent complained of nausea. On the morning of the 24th five men reported ill. Three were sent to the hospital in Dawson, and two remained at home. At 5 p.m. I was called to see the physician and the other ill members. Before I reached the hospital one patient had died.

As the doctor and superintendent took only one meal at the camp we were able to know the articles of diet exactly. The meal consisted of canned beets, apricot pie, meat (cold storage), canned beans. None of the vegetables were home-canned. During the next day or two many others were brought to hospital, making a total of 23.

There were twelve deaths, all occurring within eleven days from the date of taking the meal. We questioned the patients separately upon arrival, and learned that all patients who died ate meat, but

there were some who did not take beets, apricots or beans. Meat was the common diet of all who died.

There was a similarity in symptoms shewn by all the patients, though in some they were more pronounced than in others. The symptoms in order were: a certain amount of dizziness, diplopia, intolerance to light, impairment of speech, and a partial paralysis of the pharyngeal muscles. There was dysphagia dryness of the tongue (due to involvement of the salivary glands), and muscular weakness. There was no diarrhoea. A few vomited. The temperature was normal and the pulse regular, but progressively becoming weaker. Conciousness was retained almost to the last. Death took the form of sudden collapse.

Our opinion was that the cases were poisoning by the bacillus botulinus. We wired our findings to New York, Ottawa, Mayo Brothers, and to San Francisco. Their replies corroborated our diagnosis.

One of the authorities says:—"Symptoms of poisoning by the toxine of the bacillus botulinus may be so characteristic as to make a clinical diagnosis comparatively simple, but this does not always hold good for on some occasions the symptoms are accompanied by those of gastro-enteritis, so that some other former meat infection may be suspected." Von Ermengen, who was the first man to isolate this particular bacillus (in the year 1896,) states that "The symptoms of true botulism, that is to say, not merely from the poisoning by sausages but by any form of meat infected with the bacillus botulinus, are easily recognized; diarrhoea and vomiting are usually absent or are only slight and transitory. Usually there is no fever and no disturbance of consciousness. The characteristic signs are referable to disturbance of the central nervous system and of the various secretary glands. The effect on the central nervous system is shown by the partial paralysis of muscles supplied by the cranial nerves resulting in double vision, dilatation of the pupils, paralysis of accommodation—that accounts for the staggering gait."

We were unable to demonstrate the bacillus botulinus from any of the food on post mortem, as we have not laboratories to carry out work experimentally.

The mucous in the throat was very thick and tenacious, and could only be gotten rid of with great difficulty.

Patients spoke with great difficulty, their language being almost unintelligible, though consciousness was retained.

One patient had early symptoms of nausea and vomiting; he recovered. Another had severe diarrhoea; he recovered. The others had practically no intestinal disturbance whatever. General muscular weakness developed early. In all cases there was loss of the pharyngeal reflex. True paralysis was confined to muscles supplied by the cranial motor nerves.

Headache was quite severe in one case. It was principally occipital. Another patient complained of numbness and slight paralysis of the right arm. One patient, three days after admission to the hospital, complained of a very severe pain in the occipital region and along most of the spinal column. In nine cases the pulse was below normal, but gradually became more rapid. All patients who survived the tenth day gradually recovered, but the convalescence was slow. One man was ill over eight months, at the end of that period having difficulty in swallowing, and feeling a slight numbness in his right arm. There was a mortality of fifty per cent.

Treatment consisted in giving emetics and where possible, gastric lavage. Purgation was also tried by use of castor oil. Normal saline per rectum was administered every 3 or 4 hours. Salines were also given intravenously. Stimulation was also resorted to—strychnine—one-thirtieth of a grain every 4 hours; hot coffee, champagne, whiskey and brandy. Diet: fluids, which had to be administered carefully owing to loss of pharyngeal reflex. No antitoxic serums were obtainable.

Conclusions:

(1) The bacillus botulinus must have been in the cold storage meat. Records showed that the animal had been killed July 30th, 1917.

(2) No treatment was found satisfactory. Serum was received too late.

(3) Would recommend the boiling of all cold storage meat.

(4) The gross post mortem findings were negative.

Specimens of lungs, liver, and spleen, were sent to the pathological department of Toronto University.

(We understand that nothing could be made of the specimens, owing to changes resulting after so long a time as was required to transport them so far.)

This particular bacillus may be classified with those that produce a soluble toxine; the two other germs that are most like it are the bacillus of diphtheria, and the bacillus tetanus, the difference between these two and the botulinus is that the diphtheria and tetanus, if taken by the mouth, lose all their poisonous properties, whereas the bacillus botulinus does not lose its poisonous properties and is very quickly absorbed into the blood stream.

A writer in the Encyclopedia Medica says:—"These may be divided into three groups, the soluble toxines and endo-toxines and a further group of toxines, the granuloma group. The soluble toxines best known are those produced by the bacillus diphtheria and tetanus and bacillus botulismus. In virtue of the solubility they are carried throughout the body by the lymph and blood streams; the diphtheria and tetanus toxines produce no effects when administered by the mouth, but the botulinus toxines retain their poisonous properties."

Another authority says:—"The bacillus botulinus by its growth in meat produces a powerful toxine resembling somewhat the bacillus tetanus. Unlike the diphtheria and tetanus toxines it produces its full effect on ingestion."

Taylor, of the Royal College of Physicians, London, says:—"It should be here mentioned that some foods are poisonous in consequence of organisms which do not cause gastro-enteritis, that cause no stomach or intestine symptoms," which is a very noticeable symptom in these cases. "Thus, in some sausages, ham, canned fish, lobsters, oyster and cheese, the bacillus botulinus has been found." Osler, a recognized authority in ptomaine poisons, gives meat poisoning: "Cases have usually followed the eating of sausage or pork pie and head cheese, and also occasionally beef, veal and mutton"

Dr. R. Shaw, University of Oxford, writes:—"The bacillus botulinus; it is well known that in certain countries, especially on the continent of Europe, epidemics of meat poisoning have occurred from time to time characterized by a very definite group of symptoms referable to the nervous system; the food consumed has frequently been in the form of sausages made from liver, blood, and so forth, but similar symptoms have followed the consumption of ham, various forms of game, preserved meat and pies made from these articles, and the name of botulism has been given to this group of symptoms."

As to the question of cooking, authorities differ on that matter. William Scott, of the University of Cambridge, professor of Pathology: "In cooking, most of the bacteria which contaminate meat are killed by heat and those in the centre of roasted joints must often escapes; the bacillus botulinus already referred to produce a powerful toxine characterized by strong affinity for the nerve centres and not destroyed by boiling." I must say, further on in the same book, under bacillus botulinus, it says: "It is readily destroyed by boiling, so that thorough cooking of meat insures its safety."

Another writer says: "The bacillus botulinus causes but a slight odor or none at all so that food infected by it does not arouse any suspicion. The symptoms of botulism are apt to occur in cases in which various forms of meat are incompletely cooked; for instance, the outer part of sausages may reach a high temperature during cooking whereas the interior may escape; however, it is fortunate that a temperature of 80 degrees centigrade is sufficient as a means of destroying both the bacillus botulinus and its toxine; so that thorough cooking would thus prevent poisoning by these agents."

Report of Some of the Cases

Alphonse Rioux. Admitted at 10 a.m., May 24, 1919. Quite ill. Temperature: 97. Pulse 80. Difficulty in swallowing. Unable to talk. Castor oil given immediately, but patient was unable to swallow it. Emetic given; vomitus thick and dark. Stimulants given: strychnine 1-30 gr. every 3 hours, (hypo); normal saline 4 oz. to 1 oz. brandy per rectum every two hours. Patient's condition very serious from time of admission, and notwithstanding all treatment, patient rapidly became weaker. He died at 4 p.m., May 24th from a sudden collapse.

John Grant. Admitted at 8.15 p.m., May 24, 1919. Doctor was called to see Mr. Grant at 4 p.m. May 24th at his home. Patient complained of diplopia, unable to swallow well, and difficulty in breathing and speaking. Also somewhat nauseated and feeling weak. Reported the case to Dr. Glancy, but found him ill, and returned again to see patient at 7.15, leaving instructions for bringing patient to hospital. On arrival at hospital, attempted to give gastric lavage, but it was impossible to do so. Gave an emetic (hypo) and commenced stimulation treatment of strychnine: 1-30 gr. ever 4 hours; saline 4 oz. with brandy per rectum every four hours. Patient vomited a great deal. Condition became worse during night, more difficulty in swallowing, tongue dry, muscular

weakness marked, pupils dilated. Gave stronger stimulation; camphor and ether. Patient became very restless, complained frequently of pain in head, tightness in chest. Fully conscious to the very end—common to all cases. Temperature taken every three hours: subnormal throughout. Varying from 96 to 98. Pulse: fairly good throughout, practically normal on admission, becoming slowly more rapid and volume decreased. Until even a few moments before death, the pulse would not indicate a serious condition. Death occurred, Sunday, May 25th, at 3 p.m.

John W. McNeil. Admitted at 8 p.m., May 24, 1919. Had tottering gait, difficulty of vision, was unable to swallow, speech impaired, similar symptoms to patients already admitted. Same treatment started. As patient was unable to take treatment by mouth, nutrient enemas were commenced and continued alternately every three hours, with normal saline injections. Condition gradually became worse, developing paralysis in right arm. Died at 10.15 a.m., May 26th.

John Thompson. Admitted at 10 a.m., May 24, 1919. Quite ill. Pulse: 64, Temperature, 97. Treatment started, cathartics, hot water bottles to feet, brandy, ½ oz. every 3 hours. Strychnine also given, salines per rectum, fluids kept up, until patient was unable to swallow—the nutrient enemas ware started. Patient complained of arms being numb, and was in a very serious condition from time of admission. Died at 1.30 p.m., May 26th.

Adrien Barrette. Admitted at 6.30 p.m., May 24, 1919. Patient in very serious condition from time of admission. Same treatment started as for others. Within 12 hours was unable to swallow, and normal saline and nutrient enemas were commenced. Patient had two or three weak spells at intervals of 2 or 3 hours before death. Became very restless, and notwithstanding treatment died at 4 p.m., May 26th.

William Lawson. Admitted at 7.30 p.m., May 24, 1919. Called to see patient at home at 5.30 p.m., May 24th. Arranged to have brought to hospital at once. En route, car had to stop four times to allow patient to vomit. After arrival, stimulants as in other cases were immediately commenced. Patient complained of tightness of chest. Lungs were examined, but nothing was found. Mustard plaster applied, but of no avail. Saline given interstitially, also ozygen inhalations, nevertheless, patient died at 1.40 a.m., May 27th.

Jos. Albert Goudreau. Admitted at 10 a.m., May 24, 1919. Patient only complained of dizziness and diplopia, otherwise no serious symtoms. No paralysis whatever, and patient was feeling fairly well. Cathartics were commenced, and fluid diet given; broths, soups, brandy. May 25th. General condition not so well, slight paralysis of speech, patient did not sleep. Immediately stronger stimulation was given, salines per rectum and interstitially. However, patient became weaker and restless, and died at 11.45 p.m., May 27.

Angus Chisholm. Admitted at 7 p.m., May 24, 1919. Patient only complained of dizziness and diplopia, otherwise no serious symptoms. The following day felt somewhat improved. Stimulation treatment however was given on general principles, but patient gradually became weaker, arms being numb, severe pains in the back from head along entire spinal column. During the morning became very restless and died at 2.35 p.m., May 28th.

Finlay McDonald. Admitted at 7 p.m.,May 24, 1919. Complained of slight diplopia and headache. No other symptoms noticed upon admission. Same routine treatment carried out. Throughout illness, complained of very severe headache. Also perspired profusely. Died at 3 a.m., May 30th.

Otto Nordling. Admitted at 9 a.m., May 25th, 1919. Condition not regarded serious. Felt slightly nauseated. Stomach tube inserted, no effect. No difficulty in speech or swallowing. Cathartics given. Fluid diet prescribed. Routine stimulation of salines commenced. The evening of the 27th patient complained of soreness of throat, difficulty in swallowing. Salines given intravenously and per rectum, but patient gradually became weaker and more restless. Pains in head and entire spinal chord. Died at 10.30 p.m., May 31, 1919.

Thomas Mundy. Admitted at 9 a.m., May 27, 1919. Slight difficulty in speech but patient had taken alcoholic stimulants before admission so that a definite diagnosis could not be made for several hours. However, he was given routine treatment as for others, saline intravenously, etc., fluids; champagne, milk, as long as patient could swallow. Gradually became weaker, artificial respiration for more than an hour, but patient died at 10.15 a.m., June 1st.

THE ONTARIO TEMPERANCE ACT

One of the most prominent temperance workers in the province writes to us regarding the working of this act. He speaks as a layman, though he admits, that the matter in some respects lies technically within the jurisdiction of the medical profession, yet the effects of which vitally concern the entire province and particularly those who are actively seeking to remedy a great social evil by removing its cause.

He says: "There need be nothing conflicting in our methods or plans since there is no contradiction in our objectives. We are absolutely agreed that the fullest facilities should be afforded for the supplying of any and all liquor needed for medicinal purposes in the Province. From our standpoint, all we seek to, and all we want to deal with, is the beverage sale and use of liquor.

The present difficulty, of course, comes because of the fact, which we must face, that liquor obtained presumably for medicinal purposes is used for beverage purposes.

Let me cite a case that came to my own personal knowledge the Saturday before Christmas. A husky young medical student, hale and healthy, had delivered to him two prescriptions from different doctors, one for a dozen bottles of Guiness' Stout and the other for a quart bottle of Hennessey's Brandy.

However, it needs no argument to show that the present system is neither scientific nor satisfactory. It should be recognized, however, that this is not because the law is too *strict*, but because it is too *loose*.

These principles, I think, should guide us in action to be taken; ample provision for all medicinal needs; safeguard doctors from the importunities and impositions of bibulous or unscrupulous patients; preserve the honor of the medical profession from being besmirched by a few unworthy members; protect the public from the evil results of the beverage use of liquor. With these points in my mind, may I present for your consideration and that of your Committee the following suggestions:—

(1) That, as at present, any doctor may without restriction, issue prescriptions for an amount not exceeding six ounces of spirituous liquor, which may be filled by any druggist, separately, or compounded with other ingredients.

(2) The adoption of the permit system for prescriptions containing more than six ounces. That is, that prescriptions for larger quantities be only issued by doctors who take out permits authorizing them to do so.

(One advantage of this system, which is working out most successfully in the United States, is that it at once frees many doctors, who do not prescribe liquor and do not wish to be bothered with appeals for prescriptions, from trouble in this regard.)

(3) That only non-potable liquor be prescribed or furnished for external use.

(It is common knowledge that pure ethyl alcohol is often diluted for internal use or used to fortify near-beer or light wines.)

(4) That all prescriptions issued for amounts in excess of six ounces be upon numbered forms furnished by the Board; that not more than twenty ounces shall be prescribed for use by the same person within any period of two weeks; that no prescriptions shall be filled more than once; and that not more than one hundred be issued by any doctor within three months.

(5) That more strict provision be made regarding the obtaining of prescriptions upon false pretenses and regarding the use for other purposes or by other persons of liquor supplied upon prescriptions.

Might I further suggest that consideration be given to the whole question of prescribing beer or intoxicating malt liquors for beverage purposes, and as to whether the food value of malt or the tonic value of hops might not be as well secured by use of beers brewed in accordance with the Ontario Temperance Act, the healthful qualities of which are being largely advertised these days by manufacturers."

PROFESSIONAL BETTERMENT

The Editor of the Long Island Medical Journal has this to say:

"In civil practice there are but two incentives to keep a man up to the fullest intellectual activity, pride in himself and keen competition. If he prefers to fall behind, or what amounts to the same thing, fails to keep step with the advance, there is no compulsion that can be applied to help him in spite of himself. This condition has been recognized by the profession itself, and at least one element within the profession has endeavored to have the public halth

law so amended as to provide a gentle stimulus in the shape of an annual registration. But the very men who would be most helped have been those who most earnestly oppose this step on the ground that it would place autocratic power, which could be used for political ends, in the hands of subordinate officials of the state. I am not aware that any serious proposal to institute periodical examinations for professional fitness has ever been brought forward, nor do I believe that the general public would consider it necessary because of a prevailing belief that graduation from a medical school makes one a doctor and a doctor ceases to be a student because the public believes him to be a finished product when he has received his diploma. No one realizes better than the physician how fallacious this idea is, and no one is more tenacious of the idea than the unprogressive doctor. The problem then is one that is psychological as well as educational. To insure progress there must be some compulsion. To provide compulsion there must be at least definite public opinion. But in order that the public opinion may be intelligent and sympathetic it must be created and controlled by physicians themselves. At the present writing we must confess to be casting about for some physician whose vision is so broad, whose professional acquirements are so high, and whose humanity is so all-embracing that he may enjoy sufficient confidence among his fellows to give things a start. Small jealousies are all too rife to permit any one coterie to institute the notion of compulsory betterment, but it seems quite evident that unless the profession itself undertakes something very definite and very tangible, something that the public at large recognizes as a wholehearted attempt to give them something better than they are now getting, that same unreasoning public will, on its own initiative, institute steps that may be a hindrance to progress even as the childish groping of the Russian Soviets have torn down where they thought to build up.

PRESCRIPTION BEER AND WHISKEY

The medical profession must look to its laurels. The cults and the socialists and sundry legislative influences have recently spread sinister odium on our time-honored profession.

Now comes the late decision of the secretary of state—the regulations for the manufacture of beer, its sale, and last the prescription by the doctor.

Here is an excellent opportunity to place the profession in greater disfavor with the masses.

Upstanding and self-respecting doctors will resent the dumping of this garbage on the doctor's table.

The true physician years ago passed beyond the pale of crooked politics and booze. His function and favor concern the sick—to get them well, to lessen the misery of the world and not to spread it.

Unfortunately and always regrettably there are in every profession and walk of life those to whom the almighty dollar has first place and appeal.

But surely the profession, as a whole, will advance its professional honor and in no mild manner take a stand to resent the importation of this odious business.

No true physician would write a prescription for a case that comes into his office with a bad catarrh, say, self-diagnosed, and wished to get a prescription of cocaine for which he will pay one dollar.

No true physician should write a prescription for a patient who says, "My wife has the cramps and whiskey is the only thing that does her any good. I wish a prescription for her. What do I owe you?"

No true physician would take a dollar from even a person of means merely for the sake of legalizing his procuring a supply of beer.

The average physician does not now see the need of prescribing beer once or twice a year!—under the new system the "need" will doubtless become far too frequent.

The alcohol question just now is a very important one. The more difficult it is to get these liquors the greater some people will strive for them and the more of them they will drink because they are scarce. This is an unfortunate state of affairs. The real situation is overlooked by the general public. Alcoholic beverages have been banned as a detriment to society in general and the individual in particular. The gamblers, the sports, the underworld, the people who think they are funny when they are doing something the law forbids, and other eccentrics, the lowbrows, the pluguglies, are the persons who keep the liquor question acute. They must be held in check.

Then cometh the cartooners, ever alert to make a joke or exaggerate one, who picture the doctor in the role of the purveyor of liquor to the benighted host above mentioned. Many physicians have had their finer sensibilities wounded by the unfeeling cartooners, and have appealed to us to take up the cudgel against the traducers of the profesion. But we admit that we cannot stop them. It is galling to us, however, after originating the prohibition movement (started by the medical profession in the eighteenth century), and putting forth all our efforts to carry it through, now being shamelessly misrepresented and pictured as the prescribers of liquors as "tonics" and what not.

We cannot help ourselves in the matter and must endure the jibes, jokes and slander and laugh at it. It will do no good to act haughtily.

As it is a good law, we should instruct our clientele in the benefits of it and persuade them to obey it and whenever possible to enforce it. Do not prescribe it except when absolutley indicated.

FACTORS IN DISEASE AND DEATH

Dr. D. H. Bergey, M.D., Dr. P.H., Assistant Professor of Hygiene and Bacteriology in the University of Pennsylvania, in a lecture there on October 15, 1921, said that in order to learn how best to defend ourselves against the ravages of disease we must know which diseases are most likely to attack us and when and how that attack may be expected. Examination of the morbidity and mortality statistics of a large community shows that at certain ages the death rate is much higher than at other ages.

Of the 25,946 deaths in Philadelphia in 1919, 3,778 occurred in the first year of life, and 1,383 are classed under the heading, "early infancy." Many of the deaths in this class could have been prevented if it had been possible to give satisfactory prenatal care to the mothers.

The other important causes of death in the first year of life were diseases of the digestive tract, 988; diseases of the respiratory tract, 665; malformations, 242; general diseases, 155; violence, 134, epidemic diseases, 122.

The diseases of the digestive tract are largely due to infection by the typhoid, paratyphoid, and dysentery group of bacteria, and therefore preventable by controlling these infections in the community and by specific vaccination.

The diseases of the respiratory tract are controllable, to a certain extent at least, by the improvement of the housing conditions under which a portion of the population of the city is living so as to prevent overcrowding.

Diptheria and croup are the largest factors of epidemic diseases in children under one year of age. Active immunization against diptheria is now possible and will aid in saving many lives from this disease.

In children from one to five years of age the most important diseases are those of the digestive tract, the respiratory tract, epidemic diseases, violence and general diseases. The specific diseases causing the highest number of deaths are diarrhea and enteritis, broncho-pneumonia, violence, diphtheria and croup, pneumonia and tuberculosis.

In children of five to twenty years of age the most important causes of disease and death are tuberculosis, violence, diphtheria and croup, pneumonia and heart disease.

In adults from 20 to 50 years of age the most important causes of death are tuberculosis, heart disease, pneumonia, cancer, violence, Bright's disease, broncho-pneumonia and apoplexy. Many of these diseases are controllable where the living conditions can be regulated and the supervision of the infectious diseases is carried out to the fullest extent. The most important aid to the control of all infections is prompt notification and satisfactory isolation. The practicing physicians of the community can aid the health authorities very materially in this work if they fulfil all their duties to the patient, the family and the community in giving to each patient the oversight required, in promptly notifying the health authorities so that the community may be protected against the spread of the disease.

The most important disease at all ages is tuberculosis. This disease may be prevented by proper care of known cases, and by increasing the nutrition of young children. The nutrition classes in the public schools, Phipps Institute, Rush Hospital and elsewhere will aid materially in preventing, as well as in the treatment of tuberculosis.

In persons over 50 years of age the causes of disease which are responsible for the highest number of deaths are heart disease, Bright's disease, cancer, disease of the arteries and apoplexy. These are nearly all diseases due to the degeneration of vital organs and

tissues by toxins produced by bacteria. The most important methods of preventing these diseases are prompt alleviation of all minor infections and the proper nutrition of the body by food in the required amounts and of sufficient variety to meet the needs of the individual body.

Greatest emphasis should be laid on prophylactic use of vaccines wherever possible; adequate nutrition of the body, especially of the growing child; specific treatment of the infectious diseases where therapeutic agents of this kind are known, the treatment of the most trivial diseases and especially the so-called focal infections.

The large number of deaths from violence shows the great importance of "safety" campaigns in the industries, in the public schools, in the cars of the Rapid Transit Company and elsewhere. These campaigns of safety should be kept before the public so that persons in all walks of life may be reached, that they may be fully informed and constantly reminded of the danger from avoidable accidents and especially of the need for public playgrounds.

*HOW DOCTORS MAY BECOME FINANCIALLY INDEPENDENT

It is, alas, true that a large proportion of Medical Practitioners make unfortunate investments, resulting in their families finding it a little difficult to live as they would like. This need not be the case if professional men would make a habit of consulting a reliable investment broker before paying out their surplus funds. Messrs. G. A. Stimson & Co., 36-8 King Street East, Toronto—a firm established in 1888—make a specialty of advising their clients on each and every issue and will appreciate the opportunity of extending their facilities to Physicians, many of the Profession having been their clients over a period of years. Doctor! Save yourself a rude awakening before it is too late.

* Publisher's Department

Obituary

DR. GEORGE ELLIOTT

Dr. George Elliott, who died at his home, 219 Spadina Road, Toronto, on February 21st, following an illness of about three months, had long been a well-known member of the medical profession in that city. He graduated from Trinity College in 1895 and had practiced in Toronto since then. Latterly he specialized in diseases of the skin and was associated with Dr. Graham Chambers prior to the latter's departure overseas during the war. Up to the time of his illness, Dr. Elliott had been for many years Editor of The Dominion Medical Monthly.

Born in Troy, Ontario, where he spent his early boyhood, Dr. Elliott later moved to Culloden. He spent considerable time in teaching and in travel before graduating in medicine.

DR. GEORGE A. BINGHAM

Once again Toronto is called upon to mourn the loss of one of her out-standing physicians, this time Dr. George Arthur Bingham, who passed away at his residence, 68 Isabella Street, early on the morning of March 2nd. Dr. Bingham had been confined to bed for some weeks suffering from pleuro-pneumonia.

The late doctor was undoubtedly one of the outstanding surgeons of Canada and was held in the highest esteem by all his confreres. He was beloved by each and every one of his patients, as also by his students. Dr. Bingham was undoubtedly one of the best teachers of Surgery that the University of Toronto has ever had.

He was born in 1860 in Durham County. He received his early education in Bowmanville High School and was for some years a school teacher at Harriston. He graduated from Trinity University in 1884. He was a member of the Ontario College of Surgeons and was appointed Professor of Practical Anatomy in 1889. In 1904 he became a Senator of the University and was President of the Ontario Medical Association 1905-6.

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CONTENTS

EDITORIAL Page

Is it Chiro-quack-tic? ... 181
The Pace that Kills ... 183
Endocrinopathy ... 185
Correct Foot Wear ... 186
To Medical Students ... 187

ORIGINAL CONTRIBUTIONS

The Physician's Responsibility in Connection with Insane, by H.C. Steeve, M.D. 196
Dibromin, by R. J. Niddrie, M.D. ... 205
Cutaneous Anthrax, by A. I. Willinsky, M.D. ... 208
Results of Tuberculosis in the Home, by R. E. Wodehouse, M.D. ... 209

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Editorials

*Is It Chiro-quack-tic?

Mr. Severance Johnson has made a special investigation into chiropractic and published his findings to date (Mar. 1st.) in *Leslie's Weekly*. It is a startling revelation to medical men of the scientific school and should make them gird up their loins. For the fight is on.

Mr. Johnson has studied carefully the multitudinous literature which is printed at the "Fountain Head" at Davenport, Iowa, where these charlatans announce they have the "Prettiest printing press in the world;" he quotes copiously from the propaganda pamphlets; he has interviewed chiropractors and patients who have consulted them; he has visited their clinics and seen them perform; he tells what they profess to be able to do and how they attempt to do it; he shows how they ignore the real causes of disease, by claiming that an "impingement of the

*Since the above was placed in type. the proposed Chiropractic Bill was unanimously thrown out by The Private Bills Committee on April 11th. This was more than justified and we trust that we have seen the last of Legislation that would be so inimical to the interests of the public.

spinal nerves due to a subluxation of the vertebral processes" is the cause of all disease, and how to cure results from "adjustments"—that is, by reducing the so-called subluxations.

Mr. Johnson reports interviews with Dr. Frederick Olbee, one of our most experienced orthopedic surgeons, who has examined thousands of patients and who declares there is no such thing as subluxations of the spine—that in all his experience he has never run across such a condition—and who asserts that chiropractic is pure humbug from start to finish. Mr. Johnson also secures the opinion of Petersen, one of our leading neurologists, and of Frederick Green, secretary of the Education Council of the American Medical Association, who, like Albee, state that chiropractic is simple and unadulterated quackery. He (Mr. Johnson) cites case after case of malpractise on the part of chiropractors. He states that in New York and California, where the chiropractor is an outlaw, they seem to flourish more than in other places where their cult is not considered illegal.

From his articles one cannot help concluding that in addition to injuring medical practice for the regular practitioner they are a great menace to public health; for they ignore entirely the idea of contagion; hence when they are called to cases of diphtheria, scarlet fever, measles, typhoid, etc., they take no precautions to isolate or disinfect, they administer no antitoxin; they even do not examine the patient where the lesion exists, but at once strip the back, ascertain where the sub-luxation (?) is and readjust —for as much as they can get.

Chiropractic schools are springing up everywhere; they accept as students all comers, as a rule, no matter how poorly educated; they secure $400 or

$500 in tuition fees, give a short course in teaching adjustments, graduate their pupils, and turn them out wholesale on a simple, suffering people who are ignorant, or foolish enough to employ them.

The large cities in Canada are filling up with them; one is on the Board of Health in one of our most conservative and intelligent cities (the seat of a university!); two have been appointed by our federal authorities (shame to say) to teach returned soldiers this shameless quackery!

The medical profession has got to wake up. The Dominion Medical and the Ontario Medical Association, and the various provincial medical councils have got to get busy.

Gentle sleeper, buy the January and February *Leslies' Weekly* and see if it is not time to awake.

The enemy is at our gate.

The Pace That Kills

We regret to chronicle the deaths of so many of our confreres in the prime of life. In a recent number of the Journal of American Medical Association we noted 70 death notices of doctors. Six were between 81 and 90 years of age inclusive; four between 31 and 40; 12 between 41 and 50; 16 between 71 and 80; 16 between 61 and 70; and 16 between 51 and 60. Too many of them, it appears to us, succumbed to arterio sclerosis in one or other of its protean forms.

In a daily paper published in a small city, there is before us a chronicle of the death of one of the medicial practitioners of the place. In speaking of his career it says (in summary), "Few men have served their city in so many capacities he was in the council for many years chairman

of the very important finance committee and previously of other important committees was in the council during those tempestuous years when local option was an annual issue helped greatly in the temperance cause was very active in Patriotic work, and his work in that connection was hard, and the hours long (but he never complained) many were helped physically and cheered by his visits was a great believer in the Y.M.C.A., and was one of the greatest boosters of the local "Y" was the first president after re-organization value of his services cannot be estimated was a visitor and speaker at meetings of classes and at public functions." In politics he must also have been active as "he was several times prominently mentioned as Liberal standard bearer" "was an active church worker—an elder and member of session in any campaign was always active and effective" But "outside of his family, his greatest interest was work for boys he took every opportunity to help them." "He died suddenly at the wheel of his auto."

Gentle reader, was our good brother quite fair to himself and to his practice. He was a busy practitioner, we understand. But did he take time to eat, to sleep, to sit down to quiet reading and reflection, so much needed by us men who have such heavy responsibilities in the care of human life? The story doesn't sound as though he did.

And he is not the only doctor who is active in good words and works. Haven't most of us too many irons in the fire? What with our medical society meetings, lodges, churches, bridge parties, political caucuses, etc., along with our practises, aren't we—to use an expression less elegant than forceful "biting off more than we can chew?"

These obituary columns give us pause for reflection—and we trust action—not in taking on more work, but in "cutting out" some of our programme and getting a little more time to eat, to sleep, to read, to walk—in fact, *to live.*

The saying that "The busiest man in the world has always time for something else" does not apply to a medical man with a good practice. He should take to heart the Pauline advice: "This *one* thing I do." Cut out the lodge, the committee room, the politics, the bridge, and the church activities (if the need be), and "stick to his last;" not forgetting sufficient recreation and exercise; and intellectual intercourse with his peers (if possible); otherwise with his books.

It is "the pace that kills."

Endocrinopathy

Before prescribing it is obviously incumbent on every practitioner to make a careful study of his patient, both clinically and laboratorily, unless, for psychological reasons, his patient requires a placeto; or unless some alarming and pressing symptom, such as pain, requires temporary alleviation.

The diagnosis of many cases often is not apparent on the first, second or even third examination. This particularly applies to certain obscure abdominal cases, cases of functional nervous derangement and cases in which the endocrine glands are "dysfunctioning." The study of Endocrine disease is in its infancy. It was only in 1889, that Brown Sequard rather startled the world by his novel experiment of injecting testicular extract into his own body; and only a month or so ago that

one of Europe's most noted surgeons was given in the United States a dose of interstitial gland substance to "buck him up."

Organotherapy is now definitely recognized by the bulk of the profession—particularly pituitirm, thyroid, and adrenalin. These may be said to have come into every day use. It is safe to predict that the less well known animal extracts such as the pancreatic, mammary, thymus, corpus lutem, ovarian, testicular will take their places as remedial measures.

One of the present dangers is to prescribe these lesser known ones too freely without having made sure they are indicated; another is the too free use of thyroid and pituitirm too early or too freely in those cases in which they are indicated. Such mistakes will react unfavorably on the whole procedure of treatment by animal extracts. Volumes are being written on the subject—much of it misty and hypothetical. In no department of therapeutics is it necessary to follow the good old adage "Hasten slowly," and the other no less cogent: "Be sure you're right and go ahead."

Correct Foot Wear

One is pleased to see the sensible boot many of our Canadian boys now wear—heavy-soled, wide, and with a low, big heel. Many of the shoes are of the oxford style which allows for so much better ventilation of the foot than does the higher laced boot. Even in winter these answer very well in cities and towns, particularly if spats are worn, which is now the style.

Per contra, one is amazed to see the miserable, tightly-fitting, high-heeled shoe so many of the women and girls now wear. These must crucify the

wearers who really want to walk. In this enlightened (?) day it seems ridiculous that any intelligent woman would wear these mis-shapen leather torture givers.

Certain of our boot makers and boot sellers are trying to educate the people along right lines by making and offering for sale common-sense boots and shoes—boots and shoes that are constructed on correct anatomical principles. They are to be commended for this.

No one knows better than medical men how many women, and girls suffer from callosities, hammer toes, bunions, flat feet, cramped toes, ingrowing nails. By this time the damage is done which, in many instances, is so difficult to repair.

As with the teeth, so with the feet; youth's the season in which to make corrections—better, to prevent them.

It is, therefore, incumbent on parents to have their children's feet attended to, in order that deformities are corrected at as early a date as possible, or, better still, that they be prevented.

To Medical Students

With the graduation exercises in medicine it is well for embryo doctors to ponder over the words of the Fathers of Medicine; as well as the counsels of their own teachers.

Sydenham held that whoever applied himself to medicine ought to remember that he will one day have to render an account to the Supreme Judge of the lives of sick persons committed to his care; that whatever skill or knowledge he, by Divine force, becomes possesor of, should be devoted above all things to the glory of God and the welfare of the human race. He should remember, moreover, that

it is not any base or despicable creature of which he has undertaken the cure. For the only begotten Son of God, by becoming man, recognized the value of the human race, and ennobled by His own dignity the nature He assumed. The physician should bear in mind that he himself is not exempt from the common lot, but subject to the same laws of mortality and disease as others; and he will care for the sick with more diligence if he remembers that he himself is their fellow-sufferer.

This same high tone is shown in all of Sydenham's writings, according to his biographer, Payne. "Every physician," he continues, "who desires to be held an honest man should not only do his best to restore health to the sick, but also to give greater certainty to the art which he professes, so that it may become better and richer, and some benefit may accrue to mankind even when he himself is in his grave."

Walter Moxon says:—

> But alas! there is a vast heap of trivial, petty and fragmentary and doubtful generalizations which you will be made to learn in your great big books. Study well your books, but things teach more of you. Books tutor your reason; things tutor also at least your imagination and, if you are observant, will store in you a fund for all your faculties from fancy up to faith. Students must be fed on very concentrated intellectual food in their books, but the amount of it should bear some proportion to their time and powers. Soon they will be like so many maggots born so very deep in such very big nuts that the poor things never or rarely succeed in eating their way out to wings and daylight; perishing thus miserably short of a higher life because the supplies of their larval stage were too voluminous. Such abortive book-worms the colleges are trying to

make you all. Help yourselves, or God help you! Read with judgment, and use your senses well. Your books have no right to do more than suggest, guide, and aid towards your work in the real world you are to become meanwhile a part of. The man who only crams his 'mind' with the trivial generalizations that swell up your volumes too big, gets a peculiar look of this species of dissipation that is quite characteristic. Blankish, a-wanting, abstracted, and with a certain unreadiness on the present occasion, whenever that may be—why, even the animal young man from the turnip-fields who hangs about our Fives-Court is wider alive than he."

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"Don't let what you hear from me stand to you in the place of your own thoughtful observation and inquiry. Think out your own view of the profession honestly, liberally, and truthfully. . . .

Before we commence some trade or profession we are like social fœeuses. The progress of social development is also from the general to the special. There is an absence of what is called differentiation in boys, corresponding exactly to what physiologists tell us of in the early development of mammals. They tell us that a rather clever man cannot at first say whether the little creature is going to be a cat or a monkey, and this doubtful state hangs about it until it gets its teeth and nails, and the rest of its means of working for its living, and then anyone can see what it is. You see, the characteristic qualities come when a thing has to do its real work in the world; and when these come out, the more general (and hence useless) qualities, which had been upon the surface hitherto, go out of sight, to be hunted after by comparative anatomists. Now, in just the same way we are, as boys, all one with the rest of boys, and show the same general but useless characters which we share with young clergymen, and lawyers, and merchants; but now that we are to differentiate into

doctors, those boyish appearances and manners must recede into the depths of our nature, and we must develop the qualities of physicians and surgeons."

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"Why, the very words I began with are examples. I said you would have to *get* a *store* of knowledge. And again, for another instance out of many, we speak of a man's *capacity*. These are bad words, gentlemen. We must learn not to look upon knowledge as stuff to store into capacities as if the relation of knowledge to the mind were the same as the relation of old curiosities to a lumber-room. No! It is not capacity and storage. The knowledge that enters does not find room; it makes room. It is poor, stunted stuff if, when it gets in, it does not grow. It will make poor growth if it does not grow in harmony and adaptation to what is already there, and unite and develop with it. The educated mind is not a stuffed bag. It is true of the mind as it is true of the body. "It cometh for like a flower," though it is never cut down. The mind is a growth. . .

Take care of your freedom, and, with all your getting, get understanding. Understanding is the organization, the digestion of your knowledge, the mastery of it, so that you are in possession of its central and cardinal points, its seats of government and control.

What we want to do is, to inquire into, and grasp intelligently, the principles of every science you study; you will not keep all the details, but when the details fall like leaves, then the principles shall remain, as the stem, and boughs, and branches, to give form, and strength, and permanency to your tree of knowledge. Let over the door of memory be written, Nothing unmethodized enters here. Don't cram with ill-arranged knowledge. Don't cram for your examinations. The examination is not your real trial; you only find bail there to appear again before a higher court, where your

worth and usefulness will be vindicated or condemned without appeal. DON'T CRAM!

It is pitiful to see those poor creatures who, without putting out vital power of mind, suck, and imbibe, and swell out into shapeless lumps of unorganized learning which dies down and decomposes in them, till they go about putrescent heaps of decaying knowledge, on which theories and -opathies, and other low growths sprout and flourish like funguses on a dunghill. Don't cram. Don't fear your examinations. A wise examiner does not "pluck" for what you don't know, but for mistakes which show confusion and error in principle. Don't suppose you can "get up" in the last few months of your study such a knowledge of principles as will save you from confusion and error. You can't. Consider the limits of your acquiring intellect. Your intellect cannot take photographs; it is just one single individual point, that, like your discerning vision, can only attend to one thing at one time.

Your intellect, like a single pencil-point, will go, throughout each day, over the page of memory; and it will write deeply and durably, as attention keeps it down firmly. Please let it now write down this indelibly: *Bad Memory is another name for Inattention!*

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Don't be dazzled by brilliant aims. Keep your minds fixed on to-day's duty, for your life is not lived to an aim. *Sine missione nascimur*, we live to a duty. Don't let us think and act as if we were here to sweep disease and death off the face of the earth, or to give life for half a crown a bottle. This is rather our humbler, yet our truly nobler, service—it is, to be to each individual sufferer under our care all that a man can be to his fellowman in sickness. . . .

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"Get an independent, well-grounded familiarity with diseases for yourself, or you will never escape from the

crowd of experts that will thrust their help upon you, to aid you with all sorts of -graphs, and -scopes, and -ometers. They will importune you—these multitudes of guides—to start on the old labyrinth from their new start-point, and to follow their thread, which will put you at their mercy; but do you start from some ground you know yourself, and take your own thread. Use the new-fashioned instruments rather to guide and educate your old and trusty five senses than to replace them."

Cannot you fancy the lecturer in 2874, of the threatening ear of what I may call Panteutonic Buddhism, beginnning somehow thus: "The earliest age is known as the Scopes-age, from the name of the many kinds of instruments worn by physicians. Thus they had on their eyes things called microscopes, the nature of which is now unknown, as the records of the period were printed on bad paper, and were worse bound; but they could make the smallest trifles come to sight. To spy through these at the excretions were supposed by the ignorant patients to have a magical healing virtue. These instruments were said to magnify, a word meaning to make great; but it was afterwards found out that the things put under were really made no greater than they were before. How this strange error prevailed we cannot now understand, but it has been suggested that the constant wearing of microscopes prevented the physicians from being able to see the real relative size and importance of things. At the same early period doctors were not considered full-dressed unless they wore on their ears pipes of wood of ornamental design, called stethoscopes; and it is said they would crowd in dozens to hear an unusual squeak or whiz, which had in itself no real relation to the patients' suffering and danger; but the poor patients thought all the while that they received great benefit from this. Besides this, there were many other scopes; but for mention of them I must refer you to the historical lectures, in which you will find it shown clearly

that these delusions were but part of the universal trust in machinery which led to the downfall and decay of civilization, to which I must apologize for so long directing your attention."

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A doctor without physic is like a priest without a creed or a poet without rhyme. It is only the other day that the *Times* said: "If there be anything which nature abhors, it is a doctor without medicine or advice. . . ."

It is not only from the ancient physicians themselves that we know they were sensible doctors; indeed, physicians have always had an unfortunate way of leaving the most useful part of their advice out of their writings, and filling these with technicalities and trash more or less obscure.

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Do not be led by the rational atmosphere at this hospital to think the world is led by reason. Do you think that charms and spells are effaced, and that people do not hold to and long for them? Do not make such a mistake; they have not departed at all, nor been done away; they have only a little changed their shape, and are recognized without much difficulty. You will find the old and natural trust in spells and unknown agencies to be embodied, often very plainly, in the faithfully exact and almost worshipful deglutition of the orthodox dose three times a day. You may know it is only ammonia and gentian. They may half know it. But never think they take it as they would take a "pick me up" of brandy and soda; they swallow it as if to Æsculapius, and in the gulp their eyes sparkle with all the old ineffacable longing for help from the unknown. The time-honored potion carries with it the undying power of the medicine-gods and medicine-men of Fairyland, and of the witches, as real as ever. The conditions of emotional overstrain and tendency to unwonted credulity are natur-

ally present around the sick-bed, and often are the more urgent in proportion as the occupant of it is more beloved. The calamity came from the unknown, and they will have help from the unknown. No education or civilization will ever refine or develop them out of that, for education and civilization carry nature farther, while it remains the same as before. This insatiable demand on unknown forms of help keeps therapeutics unstable. The demand from the unknown is answered, and the -opathies come out of limbo hungry, but smiling and full of promise, and patients favor and encourage their mysterious aid, and are ready to believe that what they have taken produced all the feelings that happened since, and hope made these feelings more pleasant. Thus pretentious quackery thrives parasitically on the sufferer's faith and hope.

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Original Contribution

THE PHYSICIAN'S RESPONSIBILITY IN CONNECTION WITH INSANE AND THEIR COMMITTAL TO HOSPITAL, TOGETHER WITH SUGGESTION FOR EXAMINATION OF A PATIENT.

By H. C. Steeve, M.D.,
New Westminster, B.C.

To the physician in general practice who sees only an occasional mental patient the question of his reponsibilities to the patient, the friends and the public is often an enigma and one which I am sure he will be only too glad to discuss.

The enactment of Lunacy Laws is probably one of the earliest pieces of social legislature with which the physician came more or less directly in contact, but to-day he has in addition Workmen's Compensation Acts, Venereal Disease Acts, Vital Statistics Acts and what not others to comply with until it is little wonder if he is not confused by or neglects some of the many legal details demanding his attention.

The legal obligations of the physician under the Lunacy Act are not extensive or arduous and do not call upon him to make a diagnosis of the type of insanity present, nor in fact, to assume the responsibility of saying whether the patient should go to hospital or not. He is simply expected to prepare a certificate—in form B, schedule to the Act—in which he states that he believes the patient to be insane for reasons which he is asked to set out in the certificate. Further, the physician need have no fear of legal action as a result of his issuing a certificate, for the lunacy law of this province especially provides that he is not in any respect liable for this certificate of his opinion, if he has acted in good faith and with reasonable care (Sec. 51).

The responsibility for the final disposal of the patient

rests solely upon the magistrate or other person competent to commit to a mental hospital and the physician has not a thing to say as to whether a magistrate shall commit or not. As a matter of fact, in practice, the magistrate is largely governed in his action by the certificates placed before him but it is not in any way incumbent upon him to accept the opinions set forth in the certificates.

This is the only legal responsibility of the physician but what of his moral responsibility to his patient, the friends and the public? Relatives of the insane usually look to the physician to direct them as to procedure in gaining the admission of a patient to the hospital and, unfortunately, it happens only too often that the physician either through carelessness or ignorance, misdirects these friends and causes them no end of inconvenience and annoyance by directing them to the hospital with the "doctor's papers" as all that is necessary. The result, as I have said, is annoyance and inconvenience for friends, often unnecessary discomfort to the patient and delay in beginning of treatment, for a patient cannot be received in a mental hospital without a committal order properly made out and signed and the certificates upon which that order is based. The officers of the hospital have no powers of discretion in this matter and should they oblige fellow physicians by receiving improperly committed patients, do so at the risk of serious legal consequences to the hospital and themselves. Therefore, I would impress upon you the fact that to preserve your own dignity and reputation for infallible and boundless knowledge of all things with your clientele, as well as to facilitate the admission and early treatment of the patient you should know, always remember and never fail to see that four properly executed certificates accompany your patient to the mental hospital if you have undertaken to advise the procedure necessary to gain admission. These certificates are: Form A, the Order of Commital from a magistrate. Form B, from each of two duly qualified medical practitioners in the actual practice of their profession who are not partners nor relatives of the patient and, equally important but frequently very scantily prepared, a certificate in form C from the relative, guardian or police requesting the admission of the patient.

Gentlemen, allow the number four to become indelibly fixed in your mind and inseparably associated with the idea of procedure in the committal of the insane.

Again of the physician's moral responsibility to the public or the community. What physician in practice does not know of at least one insane person, potentially dangerous, for all insane are such, either uncared for entirely through superstition, fear or ignorance of relatives, or so badly and improperly cared for that he is rapidly losiing or has already lost all chance of recovering mental health and is a source of danger to himself and all those with whom he is associated. You will say if friends object I can do nothing. I cannot agree with you. Where friends are intelligent you can educate them to the point of believing that the patient's best chance for recovery is in the hospital, that the least chance for serious accident either to himself or those in contact with him makes it essential for him to go to hospital and above all to drive away their fears handed down through the centuries that patients are ill-treated, neglected and abused. Of the relatives who are not intelligent you have still the course open of reporting the case to and placing your certificate in the hands of the police, who will act n this case you have only to decide, which is more important, your duty to the patient and society in general with the risk of a suicide, a homicide, or what not removed, or your duty to yourself in retaining the esteem of persons whose lack of intelligence must or should force one to wonder if it is worth retaining. This question, gentlemen, is an individual problem and one which we are at liberty to decide for ourselves. There is no law compelling the reporting of insane to any authority but to my mind there should be such a law. I feel that one must be forced to this conclusion if he heeds the almost daily reports of deaths, murders and disasters directly attributed to insane persons who have not been cared for as they should have been.

The question of how to examine a patient for insanity is one which often arises in the mind of the physician. There is a subtle something developed in a person by practice and association with certain conditions which enables him to gain more from an examination than one less practised. As the surgeon

can visualize an abdomen or the physician a heart, so the psychiatrist visualizes the ensemble of a mind and as a result of his experience is able to give diagnosis and prognosis in cases which to the inexperienced seem only only a confused jumble of silly sentences and acts. The keynote of all successful examinations in any sphere of medicine is thoroughness and system, bringing out each phase and feature of the case clearly and distinctly, that none may be overlooked in drawing conclusions.

You all know full well the overwhelming importance of the history in physical illness, it is equally important in mental illness and as in one so in the other is the logical place to begin the examination. With the mental patient this not only supplies the examiner with information of inestimable value, but serves to gain the confidence of the patient, to put him at ease, and to make the intricate paths of his mind much more readily accessible to the examiner.

The family history, a matter relative to the patient, but not one sufficiently personal to embarrass him is the best and easiest place to begin, and where in the whole sphere of medicine is the family history of more importance than in mental diseases. Here you are at once gaining information concerning possible etiological factors, at the same time gaining the confidence of your patient and putting him at ease. Begin with the father, learn whether he is alive or dead, his occupation, his health, his disposition, the kind of parent he was. If he is dead, at what age did he die, of what cause, was he ill a long or short time and a quite important question indeed did he die at home. In answer to this question one will quite occasionally learn that the father or some other member of the family died in a mental hospital when the patient never had any intention of admitting that there ever was such a thing as insanity in the family. As with the father so should each member of the family be inquired about carefully, and in detail, and lateral branches of both paternal and maternal sides of the family should be investigated. This is often a tedious proceeding but the results entirely justify the time and patience required and enables the examiner to picture to himself the roots from which the mind under examination sprang in a way that cannot be accomplished by any other means.

By the time the examiner has exhausted the family history, if he has done so skilfully at all, he will be quite sufficiently established in his patient's confidence to inquire into his more intimate life and obtain the personal history. Here again he should begin at the beginning and learn the place and date of birth, for by specific and detail questions we learn many things of the patient's mind which I shall mention later. We inquire of any circumstances connected with his birth which the patient may have heard, such as whether it was a natural birth or, were instruments used. Here at the beginning of life is a possible source of injury which may have resulted in interference with mental health; at what age did teeth erupt, at what age did he learn to walk, to talk. These may seem irrelevant to mental disease but do they not at once tell us whether development was normal, delayed or precocious. We proceed to inquire for illnesses of infancy and childhood, for convulsions, seizures or other symptoms which may indicate disease or irritation of the nervous system, or for illnesses that may have affected the mental development by toxemia.

Following the developing child we inquire at what age he started school. If not until eight, ten or twelve, what delayed him. Here we may learn of an illness until then forgotten, or learn of environment which will throw very important illumination upon the morbid mental processes confronting us. We inquire of his progress at school, how long did he continue and was attendance regular. From this information we are able to judge of the receptiveness of the developing mind; of his powers of assimilating and retaining knowledge and as the history progresses, to judge of his ability to apply the knowledge so obtained.

When the history has brought the patient to the age of fourteen or fifteen the question of sexual development is inquired into with the idea of learning of unusual sexual irritations or excitements; of masturbation or other practices frequently developed at this period of life which may indicate a neurotic or nervous temperament which is so frequently the fertile soil for the later development of mental disease. With the female patient we learn at what age menstruation was established, with what difficulties and its subsequent course.

Pregnancies, their course and termination, miscarriages and abortions are all carefully inquired about and noted, for this information is important in revealing the physical health of the patient and so undoubtedly reveals valuable information which may have a direct bearing on the mental condition present. While on this subject the matter of venereal disease is best investigated and should never be forgotten, for the history of syphilis may at once give us the key to the patient's illness or the worry over an old attack of gonorrhea may at once explain many of the mental symptoms present and not formerly understood. It is well too, to bear in mind the Frendian theories and be on the watch for any suggestion of sexual incidents of adolescence which may have caused subconscious fears and suppression of normal mental processes. When this subject has been exhausted to the satisfaction of the examiner he should next ask the patient, what was the first job he ever had? How did he happen to take it? Did he like the work? How long did he keep the position? Why did he change and so on through his whole career? By these questions we learn many things. We learn of the patient's fixity and steadfastness or irresponsible and roving tendencies; we may unexpectedly uncover the beginning of persecutory ideas which had driven him from place to place and position to position and which have eventually crystallized into the systematized delusions of persecution which we find present but have heretofore only suspected. We at once are able to form a more accurate conception of the process by which these delusions have been built up, their degree of fixity, in a word are learning much of the patient's insight into his own condition.

Physical illnesses which have occurred during the patient's lifetime should be investigated. What were they? of what duration. and did they leave any effects noticeable to the patient?

We then proceed to investigate the patient's social state. Is he married or single? When, on what date was he married? The answer tells at once something of the patient's memory and his attention to details as well as giving us some information regarding his conception of the importance of this event in his life. We inquire of his family relations, have they been

smooth and uneventful, or troublesome. What seemed to be at the bottom of the troubles and how were they adjusted? Are there children? Are they all living and healthy?

The patient's mental make-up can be judged to a degree by an examination of the subject of hobbies or special interests in some particular matter, or is life to him merely a succession of days of toil and drudgery because it is necessary for ex istence.

The examiner now has a fairly intimate knowledge of his patient; his temperament and habits and is in a good position to judge the circumstances which caused the examination. If it was solicited by the patient the complaints will be taken up one by one anl inquired into. If the patient complains of peculiar odors, that his food tastes strangely and he has brought a sample for analysis, one would think at once of the presence of hallucinations and proceed to investigate the frequency of the occurrence, the reasons the patient may attribute for them and so on, until the examiner is able to satisfy himself as to whether the complaints are real or the products of a diseased mind expressed by hallucinations. In the same way the delusional field must be investigated. Why does the patient say that he is being followed, or persecuted by this organization or that person, or that this event or that was directly connected with himself. The possibility or probability of the events described together with the reasoning employed by the patient, the conclusions he comes to and the possibility of a mistaken judgment on his part must all be taken into consideration, for the delusional insane admit no possible error in their reasoning or conclusions. On the other hand if the examination is being made as a result of a request by friends or police the patient can be approached by obtaining from him an explanation of the circumstances of which friends complain or the conduct which has caused his arrest. In these cases the attitude of the patient will be quite different from that of the patient who voluntarily seeks assistance from the physician and frequently requires much patience and skilful questioning before the patient can be led into a discussion of the trouble and a revelation of his mental processes.

The information now in the possession of the examiner

must needs be sorted out and classified to enable him to come to conclusions regarding the mental condition of the patient. This can best be done in two groups. A subjective group, comprising information gathered by questioning and an objective group, the information gained by observation of the patient during the examination. The subjective group can be subdivided into the following:—(1) Delusional Trends; are delusions present, what are their character? Are they systematized and fixed, or fragmentary and fleeting? (2) Hallucinatory Trends; are hallucinations present? Which of the senses are involved? (3) Degree of Insight; Does the patient recognize any possibility of mental illness or the existence of delusional states or hallucinations? Is he able to adust his ideas or correctly interpret his sensations; to recognize his emotional states, memory defects, etc., and adjust himself or not? In other words, does he possess insight into his condition, or is it partially or totally gone? (4) Memory:—You will remember that questions were to be specific and answers definite. This was for the particular purpose of memory tests and to estimate the impressionability of the patient's mind. The memory for detail, for remote and recent events is noted in this way and the possibility of a fictitious memory where elaborate detail is supplied, must always be considered. (5) Orientation:—Has the patient been able to comprehend and express proper relations of time, place and person? Does he recognize the proper season of the year, day of the week, month, etc? Does he see in those about him persons of the past or relatives, or is he able to place them properly? Does he know that he is in hospital, home or gaol or does he believe himself in some distant city or great palace?

Objective Symptoms

Here is grouped the information gathered by observing the patient during the examination and quite frequently questions are asked with the definite intention of bringing out these features. For instance, one may deliberately ask questions to excite emotions of anger, laughter or tears in order to judge whether the mental reactions in this field approach normal or not. The objective symptoms can be classified under the following headings:

1. Attitude

What has been the patient's attitude toward his environment and the examiner? Is he suspicious and resentful or does he co-operate readily and endeavor to assist in the examination?

2. Manner

Is the patient polite, respectful and friendly, or is there affectation, insolence, aggressiveness or indifference? Are there distinct mannerisms present.

3. Attention

Is it easy or difficult to gain the patient's attention to the subject under discussion, to hold it there and get logical and specific replies; or does he reply partially or entirely at random? Is he able to fix or retain attention, or is it readily distracted by a passing bird, a whistle or some object about the room? It is quite common to find the attention very easily but very poorly retained. This is splendidly exemplified in the manic types of the Manic Depressives psychosis where the actual press of ideas makes it quite impossible for the patient to fix his attention more than momentarily on any object.

4. Retention

Can the patient retain facts stated to him previously or can he give the substance of a paragraph read to him or does his mind fail to register these matters and pass them by without receiving any impression?

5. Emotional States

Is the patient at ease or nervous and restless, does he cry, moan, laugh, shout or sing? Does he show proper emotional balance, or does he cry when he should be cheerful and laugh when he should be serious or even sad?

6. Mental Grasp

It finally is necessary to form an opinion of the mental developments or mental grasp of the patient. In the absence of definite test scales and long and careful examination, one forms his opinion from all previous data obtained, and must adjust

his conclusions of the patient's mental condition accordingly as it is quite obvious that a mind with little mental grasp or, in other words, a mental deficient might easily be responsible for acts which superficially would appear insane but which, as a matter of fact, are clearly shown to be the results of mental processes or their absence in a shallow, under-developed or deficient mentality.

It is by such a process that the soundness or otherwise of the mind must be judged and I feel quite sure that any physician, whether experienced in psychiatry or not, who will follow out the examinations as suggested here will make very few errors in issuing or refusing certificates of insanity.

DIBROMIN

R. J. Niddrie, M.D., Toronto, Ontario

In the treatment of surgical infections, two very important factors are outstanding. The first and probably most important thing to consider is drainage, without which no case of infection will make satisfactory improvement. The character of the dressings is deserving of thoughtful consideration. Moist dressings not only contribute to drainage by the most natural course, but exert a most beneficial effect upon the healthy tissues and exert an inhibitory action on the progress of the infection. Second, the addition of any chemical to a solution for the purpose of rendering it germicidal in action, involves some very serious questions. Unless such chemicals are known to possess distinct bactericidal value when applied in aqueous solution, they should be omitted. The ideal preparation is one that does possess the properties of a true germicide, is non-toxic, non-staining and, most important of all, non-irritating, when frequently applied in aqueous solution over an indefinite period of time.

In attempting to find the one agent that would come nearest to fulfilling all requirements, surgeons have resorted to the use of bichloride of mercury, coal-tar derivatives, potassium permanganate, the anilin dyes, alcohol, iodine, and many others, but not until the introduction of the Carrel-Dakin

solution was there anything offered that came near to the ideal. The Carrel-Dakin product promised to outrival all others to be used for irrigation and moist dressings, and its success would probably have been complete had it not been for the difficulties involved in supplying a freshly and properly prepared solution on all occasions when such might be indicated and needed.

I have recently done some clinical experimental work with a new chemical compound called Dibromin, which at least promises to be the near ideal agent. Dibromin is a pure, crystalline chemical substance (dibrom-malonyl-ureide) and has the formalu $C_4 Br_2 N_2 H_2 O_3$. According to a report of laboratory findings, Dibromin owes its bactericidal value to the bromine which it contains in chemical combination to the amount of fifty-six per cent., all of which is available for oxidation through its conversion into barbituric acid. So far as the bactericidal action is concerned, it appears comparable to the Carrel-Dakin product except the former depends upon bromine as an oxidizer, while the latter has the chlorine. According to recent investigations the free bromine is just as active as a bactericide as chlorine and has the advantages of being much less irritating and enters into a much more stable chemical combination, both of which are extremely important. Dibromin is readily soluble in water, making a perfectly clear solution. The apparent advantages of this product over any other similar agent available at the present time, prompts me to report a few cases that have recently come under my observation.

Case No. 1.—Mrs. B.

I was called in consultation to see a case that had been operated on for lacerated perineum. The field of operation had become extensively infected and the approximated parts were broken down. The treatment consisted of bichloride douches and compresses. When I first saw the case the entire wound was freely discharging pus of a very offensive odor. A 1:10,000 solution of Dibromin was suggested as a douche three times a day, to be followed by frequently repeated moist compresses of the same solution. Within two days the odor had all disappeared and the wound showed signs of granulation. Improvement was rapid and within two weeks the wound had entirely healed.

Case No. 2.—Child, 2 years old.

Mastoid infection. Patient had been ill for several days. Upon examination there were evidences of considerable bone necrosis. When operating it was found necessary to excavate the mastoid down to the dura mater. The wound was packed with a moist dressing of Dibromin 1: 10,000. This was changed daily and the wound completely healed within three weeks. The Dibromin solution not only rendered the field of operation sterile, but the moist character of the dressing seemed to hasten granulation. The tissues were kept softened, permitting free drainage, and the dressing removed each day without causing the slightest injury to the new cell structures.

Case No. 3.—Mr. L. Age 44.

Diabetic gangrene. When this patient was brought to Toronto, the relatives stated that the physician who had been in attendance had rendered a very grave prognosis and expressed the opinion that the man could not live more than three days. Examination revealed a typical moist gangrene of the left foot, giving off an abundance of pus with the characteristic foul odor. Urinalysis showed a considerable quantity of sugar and some albumin. Patient put on strict anti-diabetic diet and tonic treatment. The small toe was amputated and all sinuses were opened and drained. The foot was then thoroughly irrigated with 1: 10,000 solution of Dibromin and a permanent dressing saturated with the same solution was applied; this dressing was changed two or three times daily.

Following this treatment there was no further extension of the gangrenous condition and the patient showed daily improvement. At the end of ten days the urine was free of sugar. Although the condition, when first seen, seemed to warrant an amputation of the foot, this was not found to be necessary because the wound soon showed signs of granulation after Dibromin solution was applied. Improvement in the case was uninterrupted and at the end of ten weeks the wound was entirely healed and the patient was discharged. The case again reported to me eight months later. The general health of the patient was good, and the foot was entirely free of infection or any signs of the former gangrenous condition.

CUTANEOUS ANTHRAX

A. I. Willinsky, B.A., M.B., L.M., Toronto.

In 1899, Sclavo introduced the first anti-anthrax serum. He stated at that time that when the serum is used there is no necessity for local treatment such as cautery excision, carbolic injections around the local area etc. The course of this case will bear out his assertions.

Case number 13786, I. F. male, age 23, umbrella maker.

History.—On February 2nd, 1922, he bought a new safety razor outfit which included a brush. On the seventh day aftter using same he observed a small painless pimple on his left cheek, just in front of the ear. In two days "this pimple broke open and the left side of his face began to swell." On February 13th, I saw him in consultation and advised his immediate removal to the Western Hospital.

Examination.—The entire left side of his face was markedly swollen and of a dark red color. The edema extended well up into the forehead and down to the hyoid bone below; anteriorly it spread slightly beyond the mid-line; posteriorly behind the ear. The cervical glands on the left side were very enlarged but not tender. The edema extended into the mouth, pushing the left tonsil region up against the uvala. In the centre of this zone of congestion there was a blackish area about the size of a ten cent piece. Surrounding this central eschar there was a ring of pearly-gray vesicles which had a moist appearance. The entire infected area was not tender to pressure. The temperature was 102, pulse 88, respiration 20. Examination of the other organs was negative. The urine contained a trace of albumen with red blood cells. To any one who has seen cutaneous anthrax this was a classical picture.

Anthrax bacilli were demonstrated on direct smears from the necrotic area and cultural examination next day verified the direct findings.

Treatment.—Aside from moist boracic compresses applied daily to the infected area, anti-anthrax serum (Mulfords) was used as follows:—

Feb. 14th. 11 a.m. 40 cc intravenously.
" " 1 p.m. 60 cc intravenously.

"	"	6 p.m.	20 cc intramuscularly.
"	"	11 p.m.	20 cc intramuscularly.
Feb.	15th.	10 a.m.	20 cc intravenously.
"	"	4 p.m.	20 cc subcutaneously.
Feb.	16th.	10 a.m.	20 cc intravenously.
"	"	4 p.m.	20 cc subcutaneously.
	Total		220 cc within 53 hours.

Course of disease.—The edema began to subside within twelve hours after the first injection; he noticed this especially when swallowing. The temperature came down to normal by lysis in 24 hours. He was discharged from the hospital on February 21st, the core of the carbuncle having separated the day previous. He developed no reaction after any of the injections.

Comment.—In this case the early diagnosis was probably a factor in the satisfactory result; however I feel that at least with the cutaneous type of disease, we should place our sole reliance on serum treatment and avoid operative interference.

HOW TO HELP

RESULTS OF TUBERCULOSIS IN THE HOME FELT BY ALL ITS MEMBERS—A PUBLIC PROBLEM

By Dr. R. E. Wodehouse, O.B.E.

Secretary of Canadian Society for the Prevention of Tuberculosis.

The Canadian Association for the Prevention of Tuberculosis would like to feel that each member of the Canadian Red Cross Society is interested in the difficulties of those Canadians who have tuberculosis.

Unless discovered early and treated and cured before it can make headway in the system tuberculosis becomes a lingering disease. When it seriously attacks the breadwinner of a family, and prevents him from working it not only deprives the family of the benefit of his income, but also makes it necessary for the other members of the family to work harder to pay for the treatment and care of the one who is ill.

Thus the home has to pay out more money than if its members were all well, and has one less to help by earning money. The sick one will receive everything the family believes will help in overcoming the disease, and if there is not enough money coming in to provide all the family needs, those of its members who are well will be the first to deprive themselves. This has a tendency to lower their vitality, and on that account they also become more likely to catch the disease.

Even if no consideration be given to the worry and suffering which such a home has to go through, it is surely evident that some plan to properly look after the sick member of the family, and also the other members of the family, would be humane and would pay us all.

Our first duty is to have the sick one's disease discovered early, either by the patient's family doctor, or by a sanatorium or other doctor who has been specially trained in diseases of the lungs.

Our second duty must be to make provision that the loss of money to this home, caused by the cost of treatment and loss of wages of the sick one, is as light as possible.

Our third duty is to provide the best treatment possible in happy surroundings, with the patient's mind contented through the knowledge that the other members of the family are well looked after, and that he is going to get better. Further, light work, under the direction of those who have prescribed the treatment, should be provided. Such light work should be paid for, and the patient will then soon find that he is earning money again, and earning more and more each month. While the patient is gradually regaining his health and his earning power, the fact that his family is still happily carrying on is a constant source of gratification and encouragement to him, and the assistance given to the family helps its members to continue to be well-housed, well-clothed, well-fed and sufficiently vigorous to resist the attacks of the germs of the disease.

Selected Articles

SANITATION OF THE RURAL HOME

By H. L. Cook, M.D., Fayetteville, N.C.

The health of the country home depends in a large measure upon its surroundings. It is a popular opinion that life in the rural districts is more healthful than in the towns and cities. This would probably be true if the rural homes were governed by adequate sanitary laws, as is the case in most of the cities; however, as a general rule, the rural dweller is inexperienced and ignorant of the cause and transmission of diseases and this disastrous condition is merely due to lack of education. It is believed that the results of educating those people along sanitary lines would increase the sanitary status to a great degree, and stamp out a large percentage of diseases.

About one-half of the population of the United States are rural dwellers. Very few have sanitary means of sewage disposal, and often no privy of any kind is used. Usually the water supply is inadequate and does not meet the requirements of sanitation. Protection from insects is nearly always overlooked, and to a great extent the entire home is detrimental to health. The health of the people in the rural districts affects the health of the people in the towns and cities through association.

Housing

The importance of house construction for the human being, in regard to hygiene and sanitation, is not sufficiently appreciated by the public. It is true that a great deal more importance is given to the building of dwelling houses in the

towns and cities than in the rural districts; however, this should not be, as probably more than one-half of the population of the United States live in the rural section. As a general thing the rural home is constructed with no regard to site, ventilation, exposure, character of soil, material, interior arrangement or drainage.

The building site should be so located, as far as possible, as to give protection against violent winds and storms; but with free circulation around the house. The dwelling house should be not under 75 yards from the barn yard, cemetery, any marshes and preferably upon some elevated site. The material used in the home is a matter of the individual choice.

A proper system of ventilation must take into consideration the cubic space of the building to be ventilated, the number of persons occupying that space, certain other collateral elements such as exposure, the necessity for artificial heating and lighting of the house, and the season of the year. In sleeping rooms the initial air space should never be less than thirty-five (35) cubic meters for an adult (Roho & Robins) and twenty-five (25) cubic meters for a child under ten years of age. In practically all instances, natural ventilation should and does obtain in rural homes.

The method of heating for the average rural home needs must be practical and comfortably inexpensive. In most homes stoves and fire-places are found in use; the fuel usually used is wood, coal or gas. When gas is used precautions should be taken against leakage from fixtures and incomplete combustion of the gas. Stoves should be properly jacketed. When fire-places are used precaution against draughts should be taken.

Protection From Insects

Insects are responsible for many preventable diseases. The insects which most commonly transmit diseases are mosquitoes and the common house fly. It is an established fact that the house fly breeds mostly in stable manure; but, also to some extent in human excreta. It is almost always found within a short distance of its breeding place.

The diseases of mankind which may be transmitted by the human excreta are typhoid fever, para-typhoid fever, the different types of gastro-intestinal diseases and tuberculosis. Of

these typhoid fever is responsible for approximately 40,000 deaths in the United States, with 400,000 cases annually. It was proven during the Spanish-American war that with an increase in the number of flies there was a corresponding increase in the number of typhoid fever cases.

Without adequate screening of the homes the house fly will be free to feed alternately from excreta, putrefying animal and decaying vegetable matter as well as from the dining table and kitchen, bringing filth upon their legs, within and on their bodies from these various places and depositing upon the food; contaminating it with organisms found in these various places.

It has long been known that mosquitoes are carriers of diseases. Of these diseases I will only mention those that are most commonly seen in the United States and can be prevented. There is a certain type of mosquito that carries the organism of malaria fever, which is by far the most common disease in the Southern part of the United States; another species of mosquito carries the organism of yellow fever which is seen mostly in the tropical regions.

As a measure to prevent these mosquito born diseases, we must rid ourselves of the mosquito, destroy the organism of the disease in man as far as possible and protect ourselves by screens. All low places should be filled or drained, standing water should be drained, or the surface water covered with kerosene oil once a week. All tall weeds and underbrush should be cut down. Cans and other receptacles that contain water should be disposed of, unless used for some special purpose, and these should be securely covered. Persons suffering from any mosquito born disease should not be exposed to mosquitoes; this end can only be obtained by proper screening of the home.

In screening a house, care should be taken in the selection of the screen. The frame should be heavy enough not to warp and of lasting material. The size of the mesh should be small enough to exclude the smallest disease bearing mosquito; but large enough to permit free circulation of air. The screen should fit tight both the doors and windows.

Mosquito nets should be used in mosquito infested regions, but screening is more important. Nets are easily blown aside by the wind, giving free access to the mosquito.

Milk

Clean milk is absolutely essential to health. The degree of cleanliness of milk is controlled by the cleanliness of the dairy and its surroundings, and the cleanliness of the milker; also, much depends upon the dairy herd.

The diseases commonly spread through milk are tuberculosis, typhoid fever, diphtheria, sore throats and summer diarrhœa.

Very few milch cows, especially those owned by the rural dweller, are subjected to the tuberculin test. It is now believed by many medical men that a vast amount of human tuberculosis is contracted in infancy by drinking the milk from tuberculosis cows.

Typhoid fever is often transmitted by means of milk. The milker may be a carrier. Often the house fly has free access to the privy and milk supply; in this way, the milk becomes contaminated with the bacillus typhosis, if the organism happens to be in the privy contents. Many other organisms may be deposited in the milk supply, from this same source, which cause the fatal diseases in fancy, i. e., iliocolitis, or summer complaint. This disease alone causes forty per cent. of mortality among infants under one year of age. Inflammatory diseases of the udder are responsible for numerous cases of sore throat.

Milk forms an excellent medium for the growth of germs, therefore the best way to obtain clean milk is by proper care of the dairy herd, such as cleanliness of the barn and surroundings, clean milk cans and screening the dairy from flies. The milker must be of clean habits and free from infectious diseases. Cows should undergo the tuberculin test, and those that react should be discarded. A clean, well lighted and ventilated barn is necessary.

In warm weather the milk should be placed immediately after milking in a refrigerator, or in a well stopped and covered container and placed in a cool stream of water, which is protected against contamination.

Water Supply

It is a well known fact that water transmits many of the germ diseases such as typhoid fever and gastro-intestinal complaints.

The sources of water are classed as surface and shallow and deep underground supplies. The surface supplies are obtained from ponds, streams, reservoirs and cisterns. The shallow and deep underground supplies are from springs and wells.

Water obtained from surface supplies is usually polluted and should not be used for drinking purposes, unless protected from contamination and purified before using.

The underground supply is generally classed as deep and shallow. Wells under 30 feet in depth are considered shallow supplies. Very little thought is given in a large per cent. of cases, to the location of the well. On some farm homes they are located near the privy, while others are in the barnyard or stock pen, where the location invites pollution.

The sinking of a well, as regards to safety from pollution, depends upon the location, the method and the type of the sinking, the character of the soil, the surface protection and the direction of drainage.

The wells generally found at the farm houses are dug with very little protection from surface pollution and are usually of the shallow arrangement. This kind of well is usually polluted, especially when it is located near the privy or barnyard. When the water supply is near a possible source of pollution a great deal of care should be taken in the curbing and casing of the well. If this is made water tight the surface water will have to sink through the different strata whether sandy or clay soil, and is thus filtered and most of the constituents of pollution removed.

Springs usually receive their supply from the deeper strata, and are not polluted except at their out cropping; therefore, if care is taken to prevent pollution at the surface, spring water is usually safe for human consumption. The spring should be well drained, cased in and covered.

By far the best water supply that can be obtained for rural homes is a deep water supply, driven or bored well, with close

fitting, water tight, tile or iron casing, well protected at the surface by concrete platform, and located a safe distance (at least 200 feet) from the privy and barnyard. It should be equipped with one of the modern pumps.

Sewage Disposal

Directly and indirectly excreta of human beings is responsible for most all preventable diseases; therefore, it is the demand of sanitary science that proper care should be taken in the construction and operation of sanitary sewage disposal systems. The system to be used depends to a large extent on the financial status of the home. For this reason the system to be recommended should conform to the financial status of each individual home; and at the same time answer the requirements of sanitary science. These requirements should be inexpensive, convenient, fly proof, well ventilated, water tight and easily operated.

The woods, stalls, barns and open-in-back surface privy and usually the pit privy as sewage disposal systems are a menace to human life, and where these systems are found, there are always found typhoid fever and the different gastro-intestinal diseases.

The vault privy, unless well constructed, is as dangerous as a surface privy and will perhaps claim as many victims.

The "A" type sanitary pail privy recommended by the United States Public Health Service for unsewered districts (Public Health Bulletin No. 684) complies with all the requirements of a sanitary privy It can be placed in any house, is inexpensive, easily operated, fly proof, water tight, well ventilated, and convenient. The essentials of this privy consist of a fly-proof box, self-closing holes, a flue which reaches about twelve inches above the house and a metallic water tight can for the reception of the excreta.

The cement vault sanitary privy is more expensive in the beginning, but is much cheaper in the long run, because the cost of operation is not as much as the pail type, and the construction is more permanent.

ACADEMY OF MEDICINE, TORONTO

Dedication of "Osler Hall"

One of the most unique meetings in the history of the Academy of Medicine, Toronto, was held at 21 Queen's Park on Tuesday, April 4th. "Osler Hall," the splendid auditorium recently erected in connection with the Academy building, in memory of the late Sir William Osler, was dedicated before a splendid gathering of the Medical Profession and several prominent Toronto citizens. The same evening a portrait in oils of the late Sir William Osler was presented to the Academy by his brother, Sir Edmund Osler. It was greatly regretted that Sir Edmund was unable to be present in person. The portrait is a copy by Mr. James of Boston . . . by special permission of the well-known artist, John S. Sargent, and the Governors of Johns Hopkins University . . . out of the famous "big four" (Welch, Halstead, Osler and Kelly). The Chair was occupied by President Robert T. Noble. The dedication of the new auditorium as "Osler Hall" was made by the Venerable Archdeacon Cody, who is always a welcome guest at the Academy. Dr. Cody's address was one well worth listening to and we only regret that we have not space to reproduce it. The presentation of the portrait itself was, in the absence of Sir Edmund Osler, made by His Honor, Lieutenant-Governor Cockshutt, whose remarks were thoroughly appreciated. His Honor unveiled the portrait, which was temporarily hung on the North wall, but will be later rehung in a more suitable location in the building. Short addresses were delivered by the following Osler students:

Dr. N. B. Gwyn, on "Influences Bearing on a Great Career."

Dr. Harold Parsons, on "Osler from the Standpoint of a House Physician."

Dr. D. J. Gibb Wishart, on "Osler from the Standpoint of the Undergraduate."

Dr. C. D. Parfitt, on "Osler as an Incentive."

Dr. H. B. Anderson, on "The Academy's Debt and Tribute to the Memory of Sir William Osler."

Dr. F. J. Shepherd of Montreal also addressed the Fellows.

Though we have referred to "Osler Hall", in previous issues, we might again say that it is a splendid auditorium, capable of seating 250 or more. Above the auditorium there is a large journal room, providing increased accommodation for books and periodicals. The building was erected at a cost of approximately $25,000, from subscriptions of Fellows of the Academy, and should provide accommodation for some years to come. The Academy now has a membership of over six hundred resident Fellows, and a library of nearly fifteen thousand volumes, exclusive of duplicates, with two hundred or more leading Medical Journals on file. The Academy was organized in 1907 by the fusion of the Ontario Library Association with the Toronto Medical Society, the Toronto Clinical Society, and the Toronto Pathological Society.

Book Reviews

Principles of Medical Treatment by George Cheever Shattuck, M.D., A.M., Assistant Professor of Tropical Medicine, Harvard Medical School. Fifth revised edition with contributions by the following authors: Tuberculosis by John B. Hawes, 2nd, M.D.; Acute Infectious Diseases Most Common in Childhood by Edwin H. Place, M.D.; Influenza by Gerald Blake, M.D.; Diabetes Mellitus by Benjamin H. Ragle, M.D.; and Serum Treatment of Pneumonia by Henry M. Thomas, JR., M.D. Boston W. M. Leonard Inc., publishers. 1921. Price $3.50.

The old compendiums of treatment, based so much on empiricism, are being quickly superseded by newer works which base principles of treatment on sound pathology. The methods described in this volume have been tried out at the Massachusetts General Hospital and privately by members of the staff. The authors direct especial attention to circulatory disorders in the infectious diseases: the subject is so imperfectly understood that to treat it on the basis of established principles seems out of the question. They have, therefore,

advanced personal views upon which they invite criticism in order that more light may be thrown "into this dark corner of medical practice." Chapters deal with circulatory disorders, nepleritis, acute infectious diseases, acute infections of childhood, acute infections of the respiratory tract, pulmonary tuberculosis, gastro-intestinal disorders and diabetes. Chapter IX is devoted to Medication in which is discussed "very valuable drugs," " valuable drugs and non-medicinal preparations." Then follows a lists of drugs commonly useful, occasionally useful and a table of weights and measures. We wish to write more of this valuable book in a later issue of this journal.

International Clinics—A Quarterly of Illustrated Clinical Lectures. Edited by H. R. M. Landis, M.D., Philadelphia. Vol. IV., 31st series, 1921. Philadelphia and Montreal: The J. B. Lippincott Co. 1921 Price per volume $2.50, or $10.00 for series of four.

Under the caption of Clinics, Blumgarten writes informatively on adrenal injury in infections; Coffey on surgery of the large bowel, Barrett and Skillen each give clinics. Under medicine, Babcock deals with dyspnœa due to circulatory disturbance, Weber on diabetes with pancreatic fibrosis; Elsworth Smith and Shackleford on hypertension; Bass on improper treatment of malaria; Vivant on apoplectic tubercular meningitis; Bowers on traumatic epilepsy; Gratfield on pleurisy; Hubbard on Amenorrhœa in Insane cured by glandular therapy; Finsterer on ascites from duoderal ulcer; Freeman on endothelroma of pleura simulating tumour of spinal cord; Leoiaon on poliomyelitis; Meyer on rickets treated by ultraviolet light; Schauta on contracted pelvis; Langstein on German pediatrics. The section on Industrial Medicine deals with various pains, strains, sprains and fractures. The final section contains two good surgical papers—Diagnosis of fracture of the skull, by Behan; the cœfficient of safety in general anesthesia, by Goetschius.

We hope to refer to some of these excellent articles more *in extenso* in future numbers.

Diseases of the Eye—A Handbook of Ophthalmic Practice for Students and Practitioners by George E de Schweinitz, M.D., LL.D., Professor of Ophthalmology in the University of Pennsylvania. Ninth edition, reset, with 415 illustrations and 7 colored plates. Philadelphia and London: The W. B. Saunders Company. 1921. Cloth, $11.00 net. Canadian Agents: The J. F. Hartz Co., Limited, Toronto.

This well-known text book has now reached its ninth edition and has incorporated in it many advances in Ophthalmology, the result of knowledge gained during the great war—chief among these is the new method of dealing with cicatucial deformities of the lids and the sockets by means of epithelial inlays and outlays. Equally interesting but not equally successful is the application of scleral trephining and its modifications in the treatment of detachment of the retina—one of the bugbears of the ophthalmic surgeon.

We confess to an attachment to this text book, increasing with the appearance of each new edition, and regard it as the best American Text-book on the eye. Dr. de Schweinitz, has had a wealth of experience, not neglecting to tell all the various methods of handling eye conditions, singles out those with which he personally has had the best results—a most valuable feature.

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CONTENTS

EDITORIAL Page

The Academy of Medicine 221
The Influenzal Outbreak 224
Abdominal Supports 226
Medical Students and Nursing 229

ORIGINAL CONTRIBUTIONS

Diseases of the Pancreas, by Herbert A. Bruce, F.R.C.S. 231
The Achievements of the Academy of Medicine, John Ferguson, M.A., M.D. 243
The Hospital Problem, W. C. Stoner, M.D. 244

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Editorial

The Academy of Medicine

The Academy of Medicine with its May meeting closed a most successful year. It has now a membership of nearly 700, a large number of whom are showing an active interest in the institution. A new building has been added at a cost of some $24,000. This contains a splendid auditorium, "Osler Memorial Hall," as well as a commodious eating room. The old building has been partially renovated and will now be devoted to Committee rooms, Offices and Library rooms. The assets of the Academy now amount to nearly $124,000. There are no liabilities.

The running of the Academy is no easy task. Under the retiring president it prospered wonderfully. The building was paid for by subscriptions

from the Fellows. A splendid series of meetings were held during the year—Stated, and Sectional. The programmes were of a high order and the attendance was very satisfactory. There were several Star occasions—the visits of MacCarrison, Austin, Gaylord, Sir Bertram Windle, Potter and Cannon; the special Clinical Evenings at St. Michael's and the Sick Children's Hospitals, respectively; the long-to-be-remembered nights when the wonderful picture of Osler, by Sargent, was unveiled and the Tablet in memory of Fellows who died during the Great War was unveiled. Another meeting of great interest was that in which Banting and Best reported their work on the treatment of experimental Diabetes by extract of pancreas.

The introduction of dinners in the building during Dr. Noble's term has done much to create a better feeling among the Fellows and to make them more companionable. It is to be hoped that, during the coming year, it will be possible for the Fellows to go to the Academy for lunch and dinner, if they so desire. The Wayne County Medical Society, Detroit, has introduced this feature into their institution. It has paid and will pay the Toronto Academy.

The Academy has now one of the best medical libraries on the continent—the fourth in size, we gather from the remarks of Dr. John Ferguson, Chairman—Dr. Ferguson has been indefatigable in his endeavors to bring the library up to a high

standard. He is constantly appealing to the Fellows to be on the lookout for old medical books to be placed on the shelves and portraits of medical men to adorn the walls of the Academy. He leads in this sort of good work, having presented scores of rare old volumes and prints to the collection. Along with his report he handed the president a cheque for $300 he had secured from a friend to commence a Fund, the interest upon which will be used for the purchase of books.

The only unsatisfactory feature of the closing meeting was the report of the publication committee. The chairman regretfully confessed that the Academy was in possession of less than one-half the number of papers presented. Only eleven reprints had been secured. To remedy this defect, money must be secured for the publication of full transactions. All papers must be secured and all discussions as fully as may be needed. A stenographer will be required at all meetings. We were sorry to see at the meetings no attempt made to secure for record, many of the fine points made in discussion of papers. We trust the new Publication Committee will make a strenuous endeavor to obtain *all* papers hereafter. Its chairman, if alert enough, might secure a synopsis of all discussions from the men who take part, as used to be done in the British Medical Association. These papers and notes should be filed in the Archives. Some day the Academy will, we hope, be wealthy enough to pay for their publication.

Much praise was accorded the Honorary Secretaries and the Honorary Treasurer; Miss McKean, the active secretary; Dr. E. E. King, the chairman of the building committee; Dr. N. A. Powell, Chairman of the Committee on Hospital supplies, through whose efforts the memorial tablet was erected.

Dr. Noble made an ideal president. His administration was crisp and business like. He spent a great amount of time at the Academy, attending every morning regularly. He has set such a high standard that his successor will have to work very hard to eclipse it. Our congratulations are extended to him. We felicitate the Academy on the selection of Dr. Wilbur Harris (Dean of Grace Hospital) as president and Dr. Harris on the appointment.

Altogether the Academy is flourishing and we trust it will continue to make its influence felt, that it will be free from cliques, and that new blood will each year be infused into the council.

The Academy has a great future.

The Influenzal Outbreak

During the latter part of the winter we have suffered from a mild form of Influenza—principally of the catarrhal variety, involving nose, throat, trachea and bronchi, with or without the grippal pains.

We heard of no such severe cases as marked the epidemic of 1918-19. Evidently the disease is becoming less malignant year after year and will con-

tinue to remain mild until something renews its virulence. This seemed the course followed after the epidemic of 1890. What revived this terrible epidemic? Judging from the experience with bubonic and typhus, overcrowding may have been a factor in its rapid spread; for "surely" (as a writer in The Hospital and Health Review says) "the civilized world was never so crowded as it was in these war years. Vast bodies of men were aggregated in fields of war, in billets, rest camps, hutments and barracks. Trains and boats were overloaded and places of amusement were jammed." These people may have all been carriers of mild strains of influenzal germs, he continues, but passing rapidly from person to person they may have gained in virulence, perhaps helped on by the lowered vitality of many of the people. Some authorities claimed the trouble arose in China and was brought to the war zone by the coolie battalions. A significant thing was that during this great outbreak in 1918-19 the Chinese were relatively immune. The writer in the review alluded to, goes on to say that a curious parallel is found in the history of the first introduction of influenza (the Sweat) into England in the fall of 1485 by "Henry VII, with a rag tag and bob-tail crowd of vagabond and rascally soldiery enlisted from around Rouen, landed in England and defeated Richard III at Bosworth; marched to London where the first English Sweat broke out three weeks later."

These men, Creighton says, probably brought the disease to London, though they themselves did not present symptoms of the disease.

Abdominal Supports

Many men as they grow older become so absorbed in business or so fat and lazy (if successful) that they neglect exercise, tend to grow corpulent and thus allow their abdominal walls to become stretched or lax, with a consequent sagging of the abdominal contents—stomach, bowls, etc. This laxity is intensified by the semi-stooping posture many elderly men allow themselves to take. To hold themselves together, many men wear narrow leather belts; these acting as a support as well as a means of keeping the trousers in place.

Women, too, are, perhaps oftener than men, prone to this pendulosity of the abdomen. Childbearing, and in consequence the stretching of the abdominal muscles, stooping at low sinks in kitchens, lack of exercise, injudicious diet, etc, are all among the causes of this condition.

Intestinal indigestion, with putrefaction and gas formation in the large bowel, likely aggravates the condition in both sexes.

Two or three things are called for to overcome or to assist in overcoming and rectifying this trouble: regular daily exercise, proper diet, erect carage of the body and properly fitted anatomically correct abdominal supports. A number of commercial houses manufacture different styles of corsets for such conditions, which are ideal for, say, post operative conditions, post pregnancy, floating kidney, ptoses of the stomach, etc. In prescribing such

garments, care should be used to send the patient to a reliable firm, many of whom now employ experts for fitting, measurements, etc. Various calisthenic exercises, principally of the bending type, such as described in any elementary work on the subject, are very helpful. The diet, too, should be such as will minimize flatulency—the avoidance of too many candies, peas, beans and the like. The carriage of the body and properly fitted anatomically In so far as possible, the chest should be kept thrown forward, the trunk erect and the front of the abdomen kept in as straight a line as possible.

Radium

Dr. Howard Kelly and Dr. C. F. Burnham, have treated some 9,000 cases by radium. This work requires optimism. The work is difficult and needs a trained specialist. If not used skilfully, radium may cause distressing accidents.

To undertake this work, one requires one-half —or better—a gram of radium and considerable training, and should possess surgical instincts, with balanced judgment, enabling him to decide for or against operation. He also ought to be a pathologist. The microscope is essential in studying tissue and estimating progress. Cases treated early give the best results and should be studied and treated *individually*. Two cases, identical clinically and microscopically, might react differently. Palliative results were not to be ignored. Treated patients should be warned to return for examination the moment any change is observed in a superficial lesion.

Efficient radium treatment demands an emanation apparatus, a physicist, and experienced staff of radium technicians, and a new man on each pumping day of the week. A pathological laboratory is necessary and one is advantaged in having a laboratory for chemical and physical studies. An X-ray department is imperative.

Radium cures 95 per cent. of all early cases of basal cell epitheliomata. Incipient lesions are best excised with the cautery. In carcinoma of the tongue—if the lesion is forward—excise; if back implant radium—Burnham and Crowe have treated successfully seven cases of angioma in the nasopharynx. Juvenile polyps are better treated by radium than by operation. Several patients treated for lymphosarcoma of the naso-pharynx were well five years after treatment.

In carcinoma of the larynx permanent results were not striking. Here it was best to do laryngotomy and then to use radium.

Radium gave remarkable results in tubercular adenitis. In breast cancer, Kelly operates in good operable cases; in unoperable and recurrences he always uses radium. He has seen massive adherent, florid carcinomas of the breast with axillary involvement melt under radium. Though not cured, great relief was obtained. In any malignant disease of the breast an X-ray of the chest should always be made to discover whether or not there are any masses inside. The lenticular recurrences in the skin, as well as most of the large discrete masses, are easily wiped out with radium.

Radium is well worth while, if it only helps, (as it does) mediastinal lymphosarcomata, the leucemias, Hodgkin's cases and aneurysms.

In some instances, it gives splendid results in bone tumors. Some remarkable improvements have

followed its employment in brain tumors. Early malignant tumors of the bladder can be cured; likewise vaginal cancers, if the deeper structures have not been invaded. In border-line cases of carcinoma of the cervix, Burnham has had 31 per cent. of cures. Where the body of the uterus is involved, encouraging results have been recorded. For bleeding of the uterus (myopathic) radium is specific. In young girls, however, curettage is preferable. In 700 cases of fibroids, nine out of ten have been cured.

Dr. Kelly's paper on this subject, as well as others on radium and X-ray therapy, appears in the *Medical Record* for March 25th.

Medical Students and Nursing

If the time spent by medical students in studying the "History of Civilization" or some of the other fads and frills of the overloaded medical curriculum were spent in doing nursing and orderly work in a hospital, it would be of great practical benefit to them, especially when they get out into practice and have to give orders to nurses or prescribe certain forms of treatment for their patients. Students should know how to bath patients, make beds, prepare foods, set trays, give enemata, and the 101 other things nurses are taught to do and they are not.

They would soon learn these procedures. This work might form part of their early hospital training, say in the primary years. It might be taken between terms. A change is as good as a rest. After plugging physiology for six months, six weeks' work in a hospital as a nurse would be a splendid recreation. These students could also make some general clinical observations during this course.

The Canadian Journal of Medicine and Surgery

Toronto ——— Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

DISEASES OF THE PANCREAS
A SYNOPSIS OF THREE CLINICAL LECTURES

by

Herbert A. Bruce, F.R.C.S.,

Professor of Clinical Surgery,

University of Toronto

Physiology

The pancreas elaborates two secretions of which one, the external, is delivered into the duodenum through the pancreatic ducts, the other, the internal, is absorbed into the blood and passes through the liver.

External Secretion. Contains three ferments:

(1) *Trypsin.*—Activation is brought about by contact with *enterokinase* a substance secreted by the intestinal epithelium. In some instances trypsin is formed from trypsinogen by the action of calcium or bile or bacteria. It exerts a proteolytic action.

(2) *Amylase.*—Breaks down carbohydrates and needs no activation.

(3) *Lipase.*—Splits the fats. Its action is very slight in the absence of bile, which increases its fat splitting action ten fold.

Internal Secretion. It is now admitted that the Island of Langehans secrete some substance which is absorbed directly into the blood. That this substance is chiefly concerned with sugar metabolism. In gross lesions of the pancreas such as

acute or chronic pancreatitis cysts, tumors, caculi, trauma, etc., sugar does not usually appear in the urine; and if it does and remains permanent it represents a very advanced degree of destruction of the parenchyma. Even a transitory glycosuria lasting two or three days in acute pancreatitis is infrequent.

In addition to the three ferments, pancreatic juice, contains rennet, hæmotoxylin, some constituent with the power of causing necrosis and some other toxin. It is probable that these various toxins may be one poison and is supplied by necrosis of the pancreatic cell.

Functional Tests for Pancreatic Insufficiency:

(1) An examination of the fæces for undigested material or for the absence of ferments. (2) Of the urine for the possible presence of increased ferments (especially amylase and lipase) which may have been forced into the blood by obstruction of the pancreatic ducts. (3) Of the blood directly, also for the presence of ferments. (4) Of the duodenal contents obtained by aspiration. It must suffice to give a mere list of some of these tests. They are:

Schmidt's nuclear test; Sahli's glucoid capsule test; Opie's lipase in urine test. The test for diastase in urine and fæces, also in blood. Test for alimentary glycosuria. Commridge test; Loewi's papillary reaction.

Finally the direct examination for ferments in the duodenal contents aspirated through Einhorn's duodenal tube. Einhorn's method seems to offer the most reliable test of the proper excretion of pancreatic ferments into the duodenum. This together with the test for amylase in the blood, affords greater help than any of the others.

The absence of fat-spitting ferments allow large proportions of the ingested fat to pass through unabsorbed and the result is a very bulky stool of a pale, even white color, due to presence of excess fat. This is only partly simulated by chronic jaundice. The excessive amount of the stools and their white color are almost pathognomonic of advanced destruction of the pancreas. These laboratory tests are only applicable to subacute and chronic forms of the disease.

PANCREATITIS:

The fundamental lesion in all grades of severity of pancreatitis is a *necrosis* of the parenchyma due to a powerful chemical irritant. Surrounding such areas of necrosis will occur oedema, congestion, hemorrhage, etc., the inwandering of leucocytes and thrombosis. Hemorrhage is accidental and is due to damage to capillary walls or it may be from erosion of a vessel of some size. Many cases at post-mortem show diffuse necrosis without hemorrhage. Instead of describing these varying conditions as distinct entities (e.g., acute hemorrhagic pancreatitis, pancreatic necrosis, gangrenous pancreatitis, etc.), it seems much more logical to consider them as different stages of one disease.

Etiology:—There are five routes by which infection or any other casual agent may obtain access to the pancreas.

(1) From gall-stones.

(2) From the duodenum through the papilla-of-vater.

(3) By lymphatics especially the lymphatics of the gall-bladder.

(4) Directly from ulcers of the stomach or duodenum.

(5) Through the blood. The last two are rare; the third is supported by Deaver but lacks proof.

As to the first—This places the cause of the pancreatic swelling as a retrojection of bile into the pancreatic duct as the result of a stone or shred of mucus blocking the papilla-of-vater (*Opie*).

The second cause would require the duodenal juices to be forced through the papilla-of-vater and into the pancreatic duct.

Experimental work has shown that all the varieties of pancreatic inflammation can be reproduced by the injection with a syringe of various substances into the pancreatic duct, by the plugging of the exit of the pancreatic secretion by ligatures or the injection of aseptic solidifying substances into the duct. The injection of infected bile will produce a very acute pancreatitis which is primarily necrotic. The injection of duodenal contents holding enterokinase will produce pancreatic

necrosis with rapid death. The observation of Opie, is that a stone in the ampulla-of-vater caused retrojection of bile into the pancreas because the stone occluded the outlet of the common duct, while leaving open the entrance into the pancreatic duct. From experimental work a reasonable hypothesis as to the cause of pancreatitis would seem to be the entrance of bile sometimes infected (rarely duodenal contents) into the main pancreatic duct. This retroinjection of bile may be due to an abnormal working of the sphincter of the common duct, presumably a spasm which will raise sufficiently the general pressure in the gall-bladder and extra hepatic bile passages. The very low pressure under which the pancreatic secretion is ejected from the gland offers no resistance to the inflow from the common duct. This injection of bile may frequently happen and when bile is normal and contains its proper amount of mucin, no harm is done and no clinical symptoms appear. On the other hand when the cystic duct is occluded and the bile is unmixed with mucus derived from the epithelium of the gall-bladder, Flexner showed that the effect of the bile salts (sodium taurocholate), upon the pancreatic cells is more pronounced and there occurs a mild inflammation with a modern degree of pain. This may be the cause of a certain number of those short attacks of pain in the pit of the stomach often spoken of as gastritis ulcer or gall-stones. It is possible that these short attacks of pain may be due to spasm of the spinchter. If the bile is infected there will occur a more severe form of pancreatitis. The cases of severe pancreatitis will follow upon a long history of gall-stones, cholecystitis and cholangitis. There seems sufficient evidence to conclude that from one common cause all grades of pancreatic inflammation and necrosis from the least to the greatest may be produced. Necrosis or gangrene, suppuration, hemorrhage even the replacement fibrosis of the chronic cases are mere variants of the one thing and represent differences in virulence of the material which has gained entrance into the pancreas.

Now just a few words about the pathogenesis of the chronic cases, viz, those showing a replacement of the gland with fat and fibrous tissue with evidences of diminished digestion and glycosuria. This sclerosing pancreatitis may be the end result

of an acute attack which has failed to kill or it may be part of systemic diseases as lues, arterio-sclerosis and chronic nephritis.

Various Clinical Types:

(1) *Acute pancreatic necrosis*:—This in the past has been variously called hemorrhagic pancreatitis, pancreatic apoplexy, gangrenous or suppurative pancreatitis.

Gross Appearance:

The organ is enlarged, often two or three times its usual size. It is hard and oedematous and on cross section shows a marbled surface. If much hemorrhage is present, the whole organ will have a bluish black appearance. Often hemorrhage is slight or absent and then the surface is dotted with yellowish-white areas of opaque fat necrosis. The whole gland may consist of a slough lying in an abscess cavity.

Fat Necrosis:

The most characteristic phenomenon associated with pancreatic necrosis is fat necrosis. One may see in the omentum, small yellowish-white areas of necrosis of fat, compared by French authors to spots of candle grease. They are to be found in the liver, peritoneal, mesenteric and omental fat. Due to the action of the pancreatic ferments and may be absent.

There will also be present blood tinged serous exudate (usually sterile) in the peritoneal cavity.

Chronic Pancreatitis:

Opie speaks of two types of interstitial inflammation (*a*) Chronic interlobular; and (*b*) Chronic interacinar: (*a*) due to occlusion of the ducts from stones, tumors or subacute inflammation. The external secretion is interfered with but the islands of Langerhans are unaltered until very late. Glycosuria develops later and lack of digestion is a prominent symptom. In (*b*) the islands of Langerhans are early interfered with and glycosuria is a prominent symptom. The commonest cause is arterio-sclerosis.

Symptoms:

One form runs into another and in some respects it resembles chronic appendicitis.

We may divide the disease into *four* classes:—

(1) The hyperacute and acute, (2) The subacute, (3) The mild, (4) The chronic.

The above may be divided again into *two* main groups:— The first group includes the first three, the second group is the chronic, sclerosing. The chief difference is the feature of *pain,* which is the rule in the first and the exception in the second. The *first group* includes those cases characterized by attacks of epigastric pain and ending in recovery or death. In the *second group* there is serious interference with the external and internal secretion to such an extent as to cause bulky fatty stools from lack of digestion and ultimately glycosuria.

The symptoms of pancreatitis considered from the broadest standpoint may be classified into *four* groups:—

(1) Those due to the pancreas itself, viz, *pain and tenderness* due to pressure upon the sympathetic nerves in the neighborhood. Chemical signs are recognized by tests of function. Toxaemia, from absorption of split protein products, e.g., cyanosis, subnormal temperature, rapid pulse, shock, and (2) jaundice, (3) irritative peritonitis, (4). interference with motor nerves of the bowel giving rise to obstruction.

General Symptoms:

Pain. The general symptoms of acute cases are common to a number of conditions described under the term "The acute abdomen." Acute pain with vomiting occurs also in gastric and duodenal ulcer, hepatic colic, acute cholecystitis, intestinal obstruction, acute appendicitis and mesenteric thrombosis.

In acute pancreatitis pain is not only midepigastric at onset but persists in that region. It is often the most severe of all abdominal pains. It may radiate to the left or between the two shoulder blades.

Tenderness:

If care is taken to palpate with thumb or finger pressure, it will be found to correspond with the anatomical situation of the pancreas. A tender point in the left costo-vertebral angle is very suggestive.

Temperature and Pulse:

At first not above normal. The pulse later becomes very rapid. The temperature rises by the second or third day. If suppuration occurs there will be chills and fever. An abscess may form in the left loin.

Jaundice: Occurs in about half of all cases. It is due to pressure on the common duct by the swollen head of the pancreas or to cholangitis. In acute cases it is rarely deep and may last only two or three days.

Intestinal Obstruction: With meteorism of an adynamic nature is so prominent a symptom in acute forms as to mislead one in diagnosis. The successful effects of enemata will often exclude organic obstruction.

Other Symptoms: Vomiting is present; a chill is frequent and rigidity rare. Respiratory movements are not interfered with.

Diagnosis: The difficulty will be to differentiate from (1) perforated gastric, or (2) duodenal ulcer, (3) obstruction, (4) cholecystitis, (5) cholelithiasis, (6) mesenteric embolism or thrombosis, (7) renal calculus, and (8) neurosis. Perhaps the greatest difficulty will be to differentiate from gall-stones and from perforated gastric or duodenal ulcer.

Treatment:

(1) Incision and drainage.
(2) Cholecystostomy and prolonged drainage.
(3) Cholecystenterostomy.
(4) Incisions into the pancreas.

Pancreatic Cysts

The number of cysts diagnosed has of recent years increased with the increased knowledge of pancreatic disease.

The most frequent cause of cyst formation is a preceding pancreatitis and next comes injury. Then will come those cases which are due to chronic interstitial pancreatitis, with partial blockade of the duct; and finally there are the true cysts which represent tumors becoming cystic.

Clinical Types:—Cysts of the pancreas are usually divided into four groups, (1) the adenocystomata; (2) retention cysts; (3) degeneration cysts; and (4) pseudocysts.

The Adenocystomata: Are true tumors possessing a glandular structure, are lined with cuboidal epithelium, are frequently multilocular and do not contain trypsin. They are infrequent.

Retention Cysts:—They have been observed to develop behind calculi or some other form of obstruction such as a tumor or scar. The cause is generally thought to be a chronic interstitial pancreatitis leading to fibrosis.

Degeneration Cysts:—These result from a softening and cystic transformation of destroyed tissue in the pancreas. This may be the result of toxic or infective lesions as in typhoid or general sepsis; or softening of cancers and as the end result in acute pancreatic necrosis, by the liquefaction of dead pancreatic tissue. They may be the end-result of auto-digestion of effused blood.

Dr. Archibald believes that the entrance of infected bile into the pancreatic duct is frequently the primary cause not only of acute necrosis leading to degeneration cysts but also of the chronic interstitial fibrosis leading to retention cysts. There is no sharp distinction between degeneration cysts and the pseudocysts.

Pseudocysts:—The largest number of cysts coming to operation belong to this class. They are distinguished from true cysts in that they are situated not within the substance of the pancreas, but outside it, and usually in the lesser omental sac. Their wall is constituted by the peritoneal boundary of the omental sac and adjacent organs and has no epithelial lining. Their contents are blood, inflammatory exudate and pancreatic secretion. Although lying outside the pancreas, their origin is frequently some lesion of the pancreatic tissue with which they may retain a connection. The traumatic cysts and those following an attack of pancreatitis constitute a large proportion of all psuedocysts.

Cystic Contents:—These vary according to the character of the cyst. The contents of pseudocysts consist of liquefied necrotic tissue, blood and inflammatory exudate. The fluid

in adenocystomata is alkaline containing some albumin and mucin and traces of mineral salts. The contents may be only slightly turbid, brownish green or almost black. Small amounts of all three pancreatic ferments may be present. Amylase and lipase have only slight diagnostic value, whereas trypsin practically proves its pancreatic origin. On the other hand the absence of ferments does not prove the absence of a pancreatic origin. The only way to distinguish true cysts from pseudocysts at operation is by demonstrating the former's connection with the pancreas.

Symptoms:—There are no pathognomonic symptoms.

Pain:—Is usual at the onset which indicates the large share acute pancreatitis has in its causation. The growth of the cyst in traumatic cases takes from one to four weeks. In cases following acute pancreatitis it may take from a week to several months while in adenocystomata the growth is so slow that it will take years before coming to operation. During the formation of the cysts there will be found indefinite symptoms of gastric distress and a feeling of tightness or weight in the epigastrium. These symptoms as well as the tumor will be in the left side of the epigastrium.

Cyst Growth: May take place: (1) upwards, appearing in front, above the lesser curvature of the stomach under the gastro-hepatic omentum; (2) straight forward, flattening out the stomach and the transverse colon under the gastro-colic omentum; (3) further downwards between the layers of the transverse meso-colon; (4) still further downwards below the transverse colon. The second and third are the commonest.

The presence of an elastic tumor in the epigastrium with a previous history weeks or months before of epigastric injury or acute epigastric pain, must always suggest very strongly a pancreatic cyst.

Pulsation: May be present being communicated from the aorta. There may be early and rapid emaciation. Weight is rapidly regained after drainage of cyst.

Glycosuria is usually not present.

Diagnosis:—The stomach and colon should be inflated with air. The percussion note will then indicate the situation of the

mass. If it has pushed forward between the stomach and colon the tympanitic note above and below with a flat note of the cyst between will give the diagnosis. If it has pushed forward above the stomach it will be difficult to distinguish it from an echinococus cyst of the liver or perhaps a slightly distended gall-bladder, but these usually move with the inspiration, whereas a pancreatic cyst does not. If it has pushed forward below the colon then it will have to be distinguished from an omental or ovarian cyst. The former is freely movable while the latter will have its origin from below and be recognized by pelvic examination. A hydro-nephrosis on the left side or a hypernephroma or a perinephritic abscess will cause considerable difficulty but should be distinguished by the history together with the cystocopic and urinary examinations.

Some few months ago I had a case of hypernephroma, Mr. L————, in which the urinary examination including ureteral catheterization not only was not helpful but the report stated that the kidney was normal and that the tumor from which the man suffered had no connection with the left kidney.

A recent case diagnosed pancreatic cyst turned out to be a melanotic sarcoma of liver, secondary to a primary in the eye.

X-Ray:—This may be of some value in showing an indentation in the gastric shadow which may simulate an hour-glass stomach. However. it should be remembered that other conditions will do the same, e.g., a perinephritic abscess or a tumor in the transverse colon. A cyst in the head of the pancreas may obstruct the common duct causing obstruction.

Prognosis:—This. of course, depends upon the nature of the cyst. The adenocystomata are benign tumors and grow very slowly and are with difficulty curable by operation as their removal necessitates a resection of the pancreas itself. As they are possessed of secreting epithelium, drainage will not cure and only results in a permanent fistula.

Degeneration and pseudocyst are very frequently cured by incision and drainage because they have no epithelial lining. They very rarely undergo spontaneous cure by breaking into the stomach or intestines. If these cases prove fatal it is usually due to the pre-existing lesion, viz., pancreatic necrosis.

Treatment:—(1) Incision and drainage, i.e., marsupialization, (2) extirpation. As has been mentioned before incision and drainage will cure most of the degeneration cysts and pseudocysts but will not cure adenocystomata which require extirpation. Incision may be in the middle line or over the left rectus. The general peritoneal cavity should be protected by stitching the cyst wall to the anterior peritoneum and by gauze packs. The cyst should then be aspirated. First of all one would determine, of course, if the cyst had its origin in the pancreas; one should make out whether it is adherent to other organs or if it has large venous trunks over its surface which would make it difficult of extirpation. After aspiration the sac wall is opened and the interior explored with the finger. If the lining is smooth it is likely a pseudocyst, if nodular, it is probably a tumor which will later require extirpation because of the fistula refusing to heal. If only drainage is decided upon, a rubber tube is sewn into the opening of the sac and the abdominal wall closed around this. This procedure is called *marsupialization*. The mortality from this is stated to be about five per cent. whereas extirpation gives a mortality of eleven per cent. The skin may need protection by Lassar's paste. The cyst may continue to discharge for weeks or months but if it is a pseudocyst ultimate recovery may be looked for. To hasten the cure of fistulae anti-diabetic diet consisting entirely of fats and albumin together with sodium bicarbonate with meals has been recommended. A fatal result will likely be due to peritonitis or hemorrhage. The former should not occur but very little can be done to prevent the latter, which is probably due to autodigestion of the pancreatic tissue.

Extirpation:—If the cyst is small and is definitely recognized as having its origin in the pancreas this may be the primary operation or it may be done later to cure a fistula resulting from marsupalization.

Tumors of the Pancreas

Tumors of the Pancreas:—Usually *malignant*. Benign rare. Usual type of benign tumor is the adenocystoma. The malignant tumor is almost always carcinoma—very rarely sar-

coma. The carcinoma is generally situated in the head of the pancreas. In growing the tumor frequently causes obstruction of common duct by pressure, consequently it may be mistaken as arising in common duct. The tumor is an *adenocarcinoma* of the scirrhus type, occasionally it is of the soft medullary form. It is nearly always primary.

Symptoms:—Divided into two classes:

(1) Those due to pressure on the coeliac plexus, chiefly *pain*. The tumor is usually situated in the body of the pancreas, overlying the solar plexus. (2) Those due to obstruction of the pancreatic and common ducts—*lack* of digestion, *jaundice* and *pain*, of a character simulating gall-stones. Here the tumor is in the head.

Class (1) earliest symptom is the pain. "Pancreaticosolar-syndrome." Pain comes on in a person apparently in perfect health, radiates to the back, is uninfluenced by food, and is very severe and may be constant. There may be a sense of fulness in the stomach and intestines. There may be a fruitless desire to defecate.

The carcinoma of the pancreatic body grows forward above the lesser curvature.

Class (2) The tumor occupies the head of the pancreas. In its growth it gradually obliterates the pancreatic duct and also later the common duct. As a first result there is rapid emaciation from exclusion juice, recognized by functional tests. The internal secretion, however, is absorbed into the blood without hindrance, consequently glycosuria appears late or not at all. Soon the growth compresses the common duct and jaundice appears at first of slight degree and painless, but progressing steadily without remissions. If the tumor has begun close to the papilla-of-vater, jaundice appears early and progresses rapidly. Occasionally this early and rapid obstruction of the common duct leads to attacks of pain which may simulate stone.

Metastases in the liver appear early and the glands around the head of the organ are soon involved.

Diagnosis:—Is easy when the tumor is in the head of the pancreas. A quietly oncoming and progressive jaundice without pain, together with a distended gall-bladder and a rapidly increasing cachexia, follow in the wake of a tumor in this situation, a picture which is compatible with chronic pancreatitis. Even with the abdomen open it may be impossible to say whether the mass in the head of the pancreas is inflammatory or neoplastic, unless metastasis are found in the pancreatic glands and in the liver. Tumors in the body and tail are much more difficult to diagnose. Said pain resembles gastric crisis of tabes.

Treatment:—Benign tumors have been removed. The radical removal of malignant tumors is very disappointing.

A good deal may be done by a palliative operation.

A cholecystostomy or a cholecystenterostomy, anastomosing with the stomach, duodenum or the upper loop of the jejunum may be performed according to the condition found.

A pancreatectomy is not wise.

THE ACHIEVEMENTS OF THE ACADEMY OF MEDICINE

By John Ferguson, M.A., M.D.

I have been requested, as Chairman of the Library Committee, to make a few remarks on the achievements of the Academy of Medicine, and more especially with regard to that of the library department of the activities of the Fellows. I shall endeavour to be brief that I may not trespass upon the time which we all wish to accord to Sir Bertram Windle; but, my feeble efforts shall add, by contrast, to the pleasure which you shall enjoy in listening to his scholarly thoughts and eloquent words.

The activities of the Fellows of the Academy are directed along four main lines,—the social, the scientific, the securing of a home, and the library. Incidentally, I shall have occasion to touch upon all these aspects of our work, namely, our

Academy home, our membership, our meetings, our associations with each other, our journals, our books, and our pictures. It will thus be seen that we have a material, a social, a scientific, a literary, and an artistic side to our many activities.

First, let me say a few words about our Academy home. We have one of the most beautiful spots in the City of Toronto. It has been made sacred to the cause of Medicine by the fact that it was in passing this corner in conversation with the late Dr. Arthur Jukes Johnson that the young William Osler decided definitely to study medicine, a decision that has brought glory to Toronto, to the medical profession, and made for him a name "not for his own, but for all time."

Our Academy home has become one of which the Fellows may feel justly proud. On the 31st of March, 1921, our interest in the leasehold rights was placed at $6,845.87; the improvements and furnishings on the same date were estimated at $8,597.78, and, during last summer, additional building accommodation was added at a cost of $19,890.00; or, a grand total of $35,333.65.

The Fellows have now a building that furnishes an auditorium for 200 persons, a large and well-lighted reading-room, a smaller auditorium for the meetings of sections, an excellent room for Council meetings, rooms for committee meetings, for the officials, a stack house for our books, and much other shelving space throughout the building.

THE HOSPITAL PROBLEM IN RELATION TO MODERN MEDICINE

By Dr. Willard C. Stoner, Director of Medicine, Saint Luke's Hospital, Cleveland, Ohio.

A paper read before the National Methodist Hospital and Home Association, Chicago, Illinois, February, 1922.

The advances in scientific medicine and the rational application of the same have been phenomenal in the last twenty years. These advances have been of a nature that demands hospitalization very largely for the complete realization in med-

ical practice. The old ideas of medical practice are being supplanted by the new. It is obvious that, under most circumstances, home conditions will not permit of improvised hospital facilities. It is impossible to bring hospital facilities to the home, so that it has become necessary to hospitalize more and more in order that we apply in diagnosis and therapy that which modern medicine affords. The well-trained surgeon no longer performs surgical operations in the home. The well-trained internist no longer attempts to diagnose obscure conditions in the home, much less manage them. The well-trained obstetrician no longer cares for the expectant mother in the home, which too often may be at the expense of both the mother and child. The public is being educated and appreciates the importance of hospital care.

The Hospital a Workshop.

The hospital no longer stands in disrepute as a place to go to as a last resort which generally ended in death. The hospital is being recognized as a workshop where there are facilities that represent the last word in scientific medicine and workers who represent the best in training and skill that modern medicine affords. The public is coming to realize that a hospital is a community problem, that it shall have community support and shall serve everyone, the poor, the rich, and the great middle class on whom a great hardship has come by reason if the tremendous cost of medicine if it is not afforded them by an institution at a cost which shall not make it prohibitive. The public is coming to realize that hospital practice by the medical profession shall not be abused, that the hospital shall not exist for a select few physicians of a community but shall be accessible to all well-trained medical men.

It is obviously unfair to the young man who has thoroughly trained himself in modern medicine and satisfactorily met all the prescribed standards of qualification to be turned loose in a community and try to practise that type of medicine which he has been trained to practise, without hospital facilities. It must ever be true that a certain per cent. of illnesses does not require hospital care; this is especially true of the acute

illnesses where the diagnosis is obvious and definite and where the course of the disease is likewise definite. Under such circumstances, good care can well be improvised at home and the well-trained physician who does home work suffers no handicap other than that of time in carrying into the home that necessary medical attention.

We had it well demonstrated in the Army Service, in large numbers that a large per cent. of acute illnesses require no particular medical attention other than good care, encouragement of elimination and a proper diet. Nature is a good doctor and has more specifics for the cure of disease than is generally credited.

We must come to look on a hospital as a complete workshop, that is not a place to hospitalize bed-ridden patients alone for diagnosis and treatment, but as a workshop for diagnose and advise treatment in the ambulatory case such as is being done in our free clinics, and part-pay clinics. The same principle in diagnosis must be applied to all material. It is a well recognized fact that present day medicine is organized to care for the destitute and the very well-to-do, but the great middle-class is unable to buy modern medicine. Fortunately the numbers whose conditions demand this type of medicine are in the minority so that society suffers only in a limited way.

Co-operative Clinics.

The development of co-operative schemes of work, that is, shops where the obscure acute, sub-acute or chronically ill may go for diagnosis and treatment. Obviously this affords the advantage of complete findings in an individual case with a single fee which is supposed not to be prohibitive to the individual. Unfortunately these private schemes of work represent a commercial basis as most medical men are not philanthropic to the extent of rendering service for which they do not have a regular return. These co-operative clinics have their advantages and disadvantges. The outstanding advantage is the completeness of work without a prohibitive

fee and the outstanding disadvantage is the lack of personal interest in the patient and the failure properly to evaluate findings. Obviously these clinics do a certain amount of unnecessary work in order that necessary work be not overlooked. The complexity of modern medicine demands this sort of practice, hence the co-operative clinic is here to stay, but it can never represent the whole of medical practice and, if it did it would be detrimental, robbing a large per cent of medical men of individual initiative and resolving medicine into machine methods.

If we accept that the hospital represents a complete workshop for the hospitalizing of cases, and there is great advantage in having such a workshop in order that we apply modern scientific medicine, then we must accept that the hospital shall furnish the other portion of the workshop, namely, the diagnostic clinic where means are afforded for a proper diagnosis of all diseases such as our free clinics represent. Why shall we not look to the hospital as the complete workshop where all cases difficult of diagnosis shall go and be investigated at a cost prohibitive to no one, where all worthy practitioners of medicine may take their cases for diagnosis and then have advantages of suggestions as to proper therapy. Life and health should not be made prohibitive to any one and medical practice should see to it that it be within the reach of every one in so far as scientific medicine affords. Many of the co-operate clinics compete with the whole profession, that is, they not only take cases for diagnosis, but also for treatment. This will tend to lower the standard of medical practice, as it will take from the worthy man in general practice his best clientage and not afford him hospital facilities.

Hospital practice is a great incentive to do good work. Standardization of hospital practice such as is being done by the American College of Surgeons is tending to elevate the standard of medicine generally. Fads, quackery and sectarianism will thrive less when the people generally are educated as to the value and limitations of modern medicine. The facts of modern medicine rationally applied will bring a proper respect for medicine, greatly alleviate human suf-

fering, prevent disease and eliminate a great waste. The hospital must ever be the important means of making these facts accessible to the public.

Needs of Rural Hospitals.

The establishment of hospital facilities in the rural commedicine is too great to make rural practice inviting to-day. these districts. The investment in the modern training in medicine is toi great to make rural practice inviting to-day. Better conditions must be the solution. Good roads and our present means of transportation make the establishment of hospitals in the larger towns in rural communities practical. It will be less and less necessary for the acutely ill to be taken to the larger centres for diagnosis and treatment, which is often at the expense of the well-being of the patient.

The hospital must have a larger responsibility in the education of nurses who shall enter the fields of preventive medicine and public health nursing. The hospital must emphasize more and more the importance of regular complete examinations for the purpose of detecting the development of diseases that are insidious in onset. It must afford health clinics where the facts of medicine may be obtainable to every one. The story of disease would be quite a different one if diagnosis were made early always and the proper therapy applied. The hospital must furnish the same workshop that the industrial world furnishes for the man-made machine, e.g., the automobile motor. May we not think it reasonable to have inspections of the human machine in the same way? Modern medicine affords a means of diagnosing early. Disease diagnosised late generally represents either indifference on the part of the patient or a failure to properly apply the means that modern medicine affords, or perhaps both.

The satisfactory work of a hospital depends, in part, upon proper organization and correlation of the administrative, professional, nursing and social service functions of the hospital. It is well to have the professional service divided into the two great groups, viz. medicine and surgery with a director of each division. Under each division shall be classed the departments which by nature of work shall be determined either medical or

surgical. It is well to have a Director of Medicine serve as head of the department of general medicine and the Director of Surgery as head of the department of general surgery. Each department under the medical or surgical division shall have a departmental chief who shall be directly responsible to the Division Director.

A Medical Council is made up as follows, viz: Superintendent of Hospital, the Director of Medicine, the Director of Surgery, and a fourth member who shall be selected by the Department heads not including general medicine and general surgery, and shall serve for a period of one year. The Medical Council shall determine or initiate all matters of policy and standards of professional efficiency which shall be subject to the approval of the Board of Trustees. Upon invitation, a representative of the professional services chosen by the Medical Council shall meet with the executive committee of the Board of Trustees.

The Medical Council meets weekly to consider all matters that have to do with the professional services of the hospital. The professional services of the Out-Patient Department are organized in the same manner as professional services in the hospital. All visitants to the hospital have professional responsibility in the Out-Patient Department. The Department Chiefs are directly responsibile for the type of service rendered in the Out-Patient Department. The Superintendent of the hospital directs the administrative function of the Out-Patient Department, which work is under the supervision of the Director of the Out-Patient Department.

The Medical Personnel of the Out-Patient Department has access to the open ward cases and certain responsibility in the routine care under the direction of the department chief.

The Out-Patient Department is open from 8.30 A. M. to 10 A. M. which gives the medical staff the advantage of completing their hospital work early in the day and does not necessitate their return to the hospital for an afternoon clinic. The Out-Patient Department is patterned after a semi-private clinic and has facilities and equipment to make it a complete workshop such as modern medicine affords. The work in the

Medical and Children's Clinic is done by appointment, which enhances the appreciation and co-operation of the patient. Time is thereby controlled and loose, hurried up incomplete work is not done. All medical men, either staff or non-staff, must limit their hospital practice to one specialty in order to encourage the highest standard of hospital practice.

The Social Service department determines the social status of every patient applying in the Out-Patient department for professional service. The Medical Clinic department determines all diagnosis and classifies accordingly. The Social Service department keeps a follow-up system and, where failure to report at a stated time, a card or letter is mailed or, if necessary, a home call is made. A daily record of all ward entries is furnished the Social Service department, likewise a report of all discharges.

Reports of the work of the Out-Patient Department, the House Staff, the Nursing Service are made to the Medical Council weekly.

The Medical Staff meets monthly, or oftener, for the purpose of holding clinics and discussing matters of professional efficiency. Then the personnel of a modern hospital is organized into a great working force having in mind a single purpose, the rendering of skilled professional care, and emphasizes at all times the humanitarian side of scientific medicine.

Hospital treatment of the sick must ever represent skilled, sympathetic care which must never be at the expense of the patient's rights arbitrarily taken from him because of undue autrority on the part of the nurse or physician.

In conclusion, let me emphasize the great need of amplifying hospital facilities everywhere. That the hospital must be made a complete workshop accessible to all reputed physicians; that it must represent all that modern medicine affords in preventive medicine, research medicine, diagnostic medicine, curative medicine and social service; that it must be an institution of learning where nurses, physicians, and social workers shall be trained in every phase of scientific medicine; that it must render service to every one at a cost that shall never be prohibitive; that the institution shall realize, as the medical profession realizes, according to responsibility and service rendered.

Items

AU REVOIR, WATSON

Dr. B. P. Watson, M.D., F.R.C.S.E., F.A.C.S., Professor of Obstetrics and Gynaecology on the Faculty of Medicine of the University of Toronto, has accepted the professorship of obstetrics and diseases of women in the University of Edinburgh. Dr. Watson, who is at present in charge of the department of obstetrics and gynaecology at the Toronto General Hospital, has resigned his present charge and, it is expected, will proceed to Edinburgh in July.

The University of Edinburgh is one of the greatest medical schools in the world. It is the largest in the British Empire and the selection of Dr. Watson from the staff of the University of Toronto, is considered a notable tribute to the Toronto Faculty of Medicine. The position is one of the Empire's premier professorships, and has been held by many when he discovered chloroform and introduced anesthesia when he discovered chloroform and introduced anesthesia into midwifery.

Dr. Watson is a graduate of the Scottish University. He came to Toronto from Edinburgh several years ago to take his present position, severing his former connection with that institution to come to Canada. He is a gold medalist of the University of Edinburgh.

The doctor attributes his appointment to the reputation of the University of Toronto Medical School. "The eyes of the world are upon the scheme of recognition which has been going on here for the past two or three years," he said when interviewed, "and my experience here is that Edinburgh looks to give an impetus to the work there and to introduce the new methods which we have had an opportunity of doing here." The fame of the Faculty of Medicine of Toronto has spread throughout the world, and it is to such schools that the Empire is looking, Dr. Watson stated. Men come from all over the continent and even from Europe to attend the departments of the Toronto faculty.

DOCTORS DEBATING ON TUBERCULOSIS ON CALL OF D.S.C.R.

The Ottawa conferences on tuberculosis met the middle of March. Four sessions, dealing with important phases of pensionability, right to free care, asthmatic conditions, change of residence, food, and intricate methods of treatment were discussed by the following, in attendance at the call of the Department of Soldiers' Civil Re-establishment: Dr. W. C. Arnold, D.M.S., D.S.C.R.; Dr. J. S. Pritchard, Battle Creek, Mich.; Dr. J. W. Byers, Ste. Agathe des Monts, Que.; Dr. E. W. Archibald and Dr. F. M. Wells, Montreal; Dr. Miles Garrison, Prince Edward Island; Dr. A. F. Miller, Kentville, N.S.; Dr. H. A. Farris, St. John, and Dr. D. A. Carmichael, River Glade, N.B.; Dr. Bruce Hopkins, Kingston; Dr. Holbrook, and Dr. G. C. Brink, Hamilton; Dr. W. B. Kendall, and Dr. C. D. Parfitt, Gravenhurst; Dr. A. H. W. Caulfield, Dr. J. H. Elliott, Dr. S. R. D. Hewitt, Dr. J. G. Cunningham, Dr. W. E. Ogden, and Dr. R. R. McClenahan, Toronto; Dr. R. E. Wodehouse, Dr. R. S. Stevens, Dr. H. A. Rawlings, Dr. A. T. Bond, Dr. A. F. Macauley, N. F. Parkinson, B. Flexman, Dr. J. McQuay, Col. E. G. Davis, C. W. Yeo, C. W. Carter, Dr. William H. Hart, Dr. J. K. M. Gordon, Ottawa; Dr. E. N. Coutts, Freeport; Dr. Nichols, and Dr. F. H. Pratten, London; Dr. J. D. Adamson, Winnipeg; Dr. D. A. Stewart, Ninette, Man.; Dr. R. G. Ferguson, Fort Qu'Appelle; Dr. J. B. Ritchie and Sheriff Cook, Regina, Sask.; Dr. H. B. Logie, Edmonton; Dr. A. H. Baker, Calgary, Alta.; Dr. Wallace Wilson, Vancouver, B.C.

WOMEN'S ALUMNAE ELECT OFFICERS

The annual meeting of the Medical Women's Alumnæ was held at the Academy of Medicine on March 28th, the President, Dr. Woodhouse, occupying the chair. A special report was given by Dr. Stowe Gullen regarding the National Council of Women.

The election of officers resulted as follows: Honorary President, Dr. Stowe Gullen; President, Dr. Sproule Manson; Vice-

Presidents, Dr. Bennett, Dr. Hume and Dr. Smillie. Out-of-town representatives: Dr. Macdonald of Huntsville; Dr. J. McBean and Dr. Langshaff; Secretary, Dr. Isabelle Ayer, 1271a St. Clair Avenue, Toronto; Treasurer, Dr. Edna Guest; Representatives to National Council, Dr. Stowe Gullen, Dr. Margaret Johnston and Dr. Douglas; Representatives to United Alumnæ, Dr. Manson and Dr. Stewart.

Selected Articles

PROPHYLACTIC AND THERAPEUTIC TREATMENT OF RESPIRATORY INFECTIONS

By G. H. Sherman, M.D., Detroit, Mich.

With winter coming on we will surely have the usual prevalence of pneumonia unless the colds which precede serious lung infections are promptly cured through active immunization by the timely administration of an appropriate bacterin; and in case such preliminary precautions are not employed, it is fair to predict that the usual death rate will prevail unless the resulting pneumonias are promptly brought under control by the early administration of a pneumococcus combined vaccine.

That colds may be promptly and effectively eliminated from a few vaccine injections has been so conclusively demonstrated that even the most skeptical are obliged to yield in their criticism to the teachings of experience. That these so-called colds are due to infective processes involving the upper respiratory tract, often with extensions into the bronchi, are mostly due to pneumococci and streptococci is now well established, and that infections of the more virulent types of these infecting organisms are liable to produce serious consequences can not be questioned, then why not treat all colds with bacterins and give those who suffer from these minor ailments the advantages of a rapid recovery and at the same time protect them prophylactically against the more serious infections?

If the possibilities of controlling these prevalent infections by this means were generally recognized there is no doubt but that this method of treatment would be uniformly adopted; but there is still

much theoretical criticism as to the feasibility or practicability of immunizing against these common diseases. Theoretically, we will admit that it does not look like a rational procedure to inject killed germs into the subcutaneous tissue of a patient suffering with an infection from the same variety of germs as the ones injected. If a man is infected, caccinated with a live germ as it were, why should vaccination with a killed organism by giving a bacterial vaccine do any good? If a person has a pneumococcus infection of the nasal passage or pharynx, what reason is there to believe that killed organism injections will more effectively and more promptly immunize than the antigenic influences of the prevailing infection? These theoretical objections to giving vaccines in the presence of an acute infection all center around the problem of immunization with the contention that killed organisms when injected into healthy tissues could not be expected to produce a greater degree of immunity, or more rapid immunization, than is liable to develop from the antigenic influence of the toxic activities of the organisms in the infected area. Theoretical contentions based on a plausible hypothesis always make a good base for an argument, but when the things contended for do not conform with the facts as ascertained by experiences all the theorizing is of no avail. A cold will on the average run its course in from two to six weeks, in case no complications set in. If a pneumonia, mastoid or sinus infection, a bronchitis, nephritis, endocarditis or arthritis sets in it may require that many months before recovery takes place, with some fatal terminations, and permanent physical injuries left over to account for. By employing bacterial vaccines in the treatment of these colds it will require from two to six days instead of that many weeks or months to effect a cure. Such beneficial results from vaccine injections certainly have a more decided immunizing effect than the organisms present in the infected area produce. And after a more careful investigation of the influences of virulent live organisms, on tissue cells, it is found that their antigenic properties are not at all in proportion to their toxic actions. We find that in very toxic infections immunization is retarded, resulting in a prolonged illness, or it may be inhibited and terminate in death,

and these toxic properties must be ascribed to the destructive influence of the live organisms irrespective to its anti-genic properties. A live organism must possess the faculty of digesting and assimilating so it can grow and multiply. In the paracytic life of an infection the micro-organism carries on this digestion and assimilation at the expense of the living tissues of the body and it is this destructive influence that exerts such devitalizing, inhibiting activities on the immunizing mechanism. So, instead of actively stimulating tissue cells for antibody production, live organisms retard or inhibit immunization; while killed organisms, on the other hand, when brought in contact with healthy tissues actively stimulate, exercise, train, tissue cells for antibody production, because they process the bio-chemical construction of invading organisms, but being killed they cannot digest and destroy healthy tissues, consequently the entire cell energy may be devoted to the development of antibodies. This offers at least a rational explanation for the rapid recovery from an infection under the influence of killed organism injections.

The dangerous tendencies of a cold are universally recognized. By employing this simple method of immunization these dangerous tendencies of colds are not only avoided, but the disagreeable effects from a prolonged illness, incidental to the cold, are also avoided. In all our experience in the treatment of colds with vaccines, no pneumonias or other complications developed.

Book Reviews

Text Book of Embryology, by Frederick Randolph Bailey, A.M., M.D., and Adam Marion Miller, A.M. Fourth edition, with five hundred and three illustrations. New York: William Wood & Company. 1921. Price $6.00.

The chapter on the cell in the earlier editions has been omitted, because the student is already familiar with it. In

the present volume the early processes of development—cleavage, gastrulation, etc., are not treated in separate chapters;—the early stages are treated in succession in a given animal form. Individual chapters are given to the amphioxus, the frog, the chick, and the mammal. A chapter is added on foetal membranes, and the portion of the work dealing with organogeny has been revised.

This text-book is an outgrowth of the course on the subject in Columbia. Some of the best methods of procuring, handling, and preparing embryological material and some of the more important formulae are given. Respecting the nervous system, the authors give a general conception of the subject, the mastery of which will give the student an insight into the structure and significance of this important system.

The authors state that although this work is distinctly one on *human* embryology it is not possible nor advisable to confine the study wholly to human material. Material for the study of the earliest stages in the human embryo (first 12 days), is entirely wanting; and human embryo under 20 days are very rare.

The work is profusely illustrated, well printed and the subject matter clearly set forth. It should interest all practitioners of medicine, as well as all medical students.

Neoplastic Diseases—A Treatise on Tumors, by James Ewing, A.M., M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City. Second edition, revised and enlarged, with 514 illustrations. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto, 1922. Price $13.25 net.

The early call for a second edition of this monumental work is an evidence of the favorable reception and worth of the original publication. As stated in the author's preface, the object is to present the main features of the origin, structure, and natural history of tumors. The view is taken that neo-

plasms consist of a great number of clinical and pathological entities, and an effort is made to consider the etiology, structure, and clinical course from this standpoint.

The contents are divided into two main groups, viz:—General Oncology and Special Oncology. At the end of the text is an extensive bibliography which should be specially useful to those interested in research work. The book is comprehensive and written with great skill and care. The text is clear and the numerous illustrations are beautifully reproduced from excellent photographs.

Formulaire Astier, 2nd Edition. Completely re-written and brought up to date. A *vade mecum* of Practical Medicine, General Therapeutics, including Treatment, by Medical and Surgical, as well as Special Maladies; also Pharmacology; Hygiene, rules and regulations. Price: 25 Francs. Libraire Du Monde Medical, 47 Rue Du, Dr. Blanche, Paris, 1922.

Ringworm and its Successful Treatment, by John P. Turner, M.D., Medical Inspector of Public Schools, Philadelphia. Illustrated by eight half-tone engravings. Philadelphia: F. A. Davis, Co., publishers. 1921. Price $1.00 net.

This author discusses the history of ringworm, its diagnosis, differential, and pathology. He then proceeds to describe how he treats his patients.

Dr. Johnson's Collection of Notes. Copyright 1919, by C. L. Johnson, M.D., Ripley, Tenn. Second edition.

This is compilation of hints for treating many maladies—largely according to homeopathic principles.

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CONTENTS

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EDITORIAL

Page

The Obession of Spiritism 1
Monsieur Coue in London 3
Holiday Time Again 5
Sir Alfred Pearce Gould 7
Passing of THE RECORD 9

ORIGINAL CONTRIBUTIONS

Arterio Sclerosis, by G. S. Young, B.A., M.D., ... 12

The combination of tonics and stimulants explains the clinical results obtained in the treatment of nervous disorders by the use of

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Editorial

The Obsession of Spiritism

One of the most reasonable points of view concerning the absolute acceptance and advocacy of Spiritism by such men as Sir Conan Doyle and Sir Oliver Lodge, is that expressed in a recent able address on the subject by Dr. C. B. Farrar and published in the Journal of Neuro-Psychiatry when he says "Assuming the national constitutional bent, these men having dedicated themselves to the inquiry, grew old in their quest, which assuming more and more importance as the years passed, eventually became a veritable obsession."

The primary meaning of the word "obsession" is "possession of one's consciousness by a foreign personality." But presumably the term was used in the generally understood application to a life motive developed to a degree that prevents an unbiased judgment.

That this should be the case is an absolutely natural result. Given the constitutional bent, it is the history of all great artists, explorers, and ardent researchers in every field of development. The world would have made, or will yet make, but slight advance in arts and sciences were it not for the men, who, having first the hereditary bent, and added to it years of continuous study and experiment in some one department of knowledge, become more or less lop-sided. But at least they are admitted to be experts in their own line, and their findings in this one direction are received with respect, if not full acceptance.

Thus far, in Spiritism, it is not so. Men, unemotional, scientific, cold-blooded, as it were, and generally acknowledged to be both high-principled and sincere, give thirty or forty years of their lives to research into psychic phenomena. They reach certain conclusions, achieve certain convictions, which they have the courage to proclaim, and we, of the proletariat, refuse to accept their findings or share their convictions. The evidence appears so devious, cloudy, and far-fetched.

Rightly or wrongly, the average human of balanced mentality looks for stronger, more direct proof, one more worthy of the subject of research than any yet shown. And therefore it appears to the majority that these men of unquestioned veracity and scientific attainments have lost their ability to critically discern, in their eagerness to

accept. The dispassionate investigation of their earlier research has ended in the passionate acceptance of the eager-to-be-convinced enthusiast.

They have become obsessed.

Monsieur Cou in Londoné

That psychotherapy has advanced to a recognized position in medical science is generally acknowledged by leaders of that profession. It is no longer possible to ignore its findings. Time was—and of comparative recent telling—when the medical man who openly advocated and practised such treatment and endeavored to bring it within the recognized professional boundaries was looked upon askance or ostracized by his fellows.

At the present moment the keenest interest is being shown in all that relates to this new and apparently limitless field of medical science. Our sanest thinkers in philosophy and religion, our most conservative press writers are all devoting time and thought to this subject; and their balanced judgments incline favorably toward the vast affirmative possibilities of psychotherapy.

It is not easy to excite public attention in London. But the presence there a few months ago of M. Emil Coué, the French psychologist, and his demonstration of cures by suggestion stirred the phlegmatic old city greatly. The London press—even the sober *Times*—devoted more or less space to the consideration of this healing by suggestion, and the vastly larger problem of which it forms a factor.

M. Coué appears to have worked quietly, successfully, with simple methods and with strict avoidance of self-advertising, thereby winning the confidence and respect of press and public. There was apparently nothing new in his method. He practised the ordinary procedure of the trained psychologist as followed in cases of shell shock and similar nervous states, although it seemed there was also the added force which comes of an intense conviction of personal power.

To quote Dr. Ash, the noted English psychologist, "M. Coué did a really good work in rousing public attention to an important and neglected force for good. Psychotherapy suffers in no way from attention being drawn to it, but from neglect. . Coué's particular forte is to teach us to use the process of suggestion to help ourselves. By his movement (lectures and healing) he explains to suffering humanity that there is an immense power for healing resident in the individual. Only the individual must be brought to realise it and use it . . Nature's whole tendency is to get us well."

Special obligation rests upon the medical profession to inquire carefully into every advancing phase of this department of the science of healing, since in no other branch is the entire moral and spiritual life-attitude of the individual so largely involved. Ministers, teachers, and all other leaders of the people realize this, and wait upon the pronouncement of the medical scientist.

The famed and well-beloved Dr. Jowett, in a recent sermon dealing with the healing ministry of the Master, alluded to the subject in these words—;

"Our psycho-analysts are going into the mysterious underworld of the subconscious. They are bringing out the things that live there and leading them to destruction. With all its immaturities, psycho-analysis has done one good thing. The psycho-analyst comes face to face with a physical malady and he traces its cause to a tyranny within. I have read much on the subject," Dr. Jowett added, "but I have not yet found one who claims that he can deal with buried guilt—sin unconfessed, unrepented, festering in the dark for years—except he lead the sick man to the Saviour."

Holiday Time Again

There are no men, we think, under severer strain —bodily and mental—than members of our profession. This statement applies particularly to the most of the rank and file who are busy men. Less forcefully does it apply to the men who have little to do—men of the "stickit" sort, or who are dropping out of work.

Change is absolutely necessary. Our wisest and busiest men get away quite frequently during the year, and are becoming victims of golf.

Sir Benjamin Brodie says in his biography, that in the autumn of 1814, his health began to fail—

he became dyspeptic, lost flesh, and altogether looked to his acquaintances as one laboring under some serious organic disease. He attributed his illness to his unceasing occupation of mind and body for a long period, and, partly to having been during ten years in London, never breathing the air of the country for more than two or three days at a time, and that on rare occasions. His indisposition was not sufficient to prevent his attending to his profession; but, his spirits were depressed, exertion difficult and his life wearisome and uncomfortable. This malaise went on until the following autumn—sometimes more, sometimes less—when he went with a friend to the seaside.

"It was remarkable," he writes, "how much, and what immediate refreshment this change of air and freedom of labor afforded me. I returned to London quite an altered person, and had only an occasional recurrence of my former symptoms during the following winter."

Canadians are fortunate in their latitude: they live in a holiday land, a vacation paradise. What they need is change of scene like Sir Benjamin, and some of them will find rest and recuperation down by the sea—on the coasts of Gaspe, Prince Edward Island, Nova Scotia, or New Brunswick. Those near the Pacific will enjoy British Columbia, Vancouver Island. A trip up the "Inside Channel" from Victoria to Skagway (900 miles) along the western coast of British Columbia, and Alaska is one never-to-be-forgotten. If the purse allows the

run from Skagway over the Coast Range on the White Pass Railroad to White Horse (110 miles) on the Yukon river and a trip by canoe or steamer on to Dawson (350 miles), the centre of the wonderful Klondike country—nothing could be more pleasing. A week or ten days in Dawson, then a week down the wondrous Yukon (2,000 miles north) to Behring sea, the wonder grows. From St. Michael's at the mouth of the river or from Nome Goldfields near by, palatial steamers carry the tourist to Seattle, or San Francisco. This gives one a trip to think about in after days. By this time the psychasthenia will have vanished and the wonder-struck holiday-maker will turn eastward to his waiting clientele ready for another year's work.

Sir Alfred Pearce Gould

One of the most eminent surgeons in the English-speaking world passed away rather suddenly in late April.

Sir Alfred Pearce Gould occupied first rank in medical science. His professional knowledge was many-sided. He has been described as "a worker of miracles in the human frame," and his services were eagerly sought for, far and near.

His chief professional characteristic—possibly one of the chief factors in the surgical success he achieved—was a thoroughness in all he undertook

which allowed of no jagged edges; "Which led him" writes one of his fellow workers, "among other things, after an operation, to fasten the last bandages with his own hands."

But with this professional exactness of detail went the fine simplicities of character and conduct recognized as attributes of so many great scientists. Sir Alfred was a lover of books, a genial host, kind and considerate to a degree. It is reported that he never would take a fee either for consultation or operation from ministers of religion; and the number who sought his aid was amazingly large.

When war came, he undertook the charge of the Third London Hospital, at Wandsworth—a task which demanded his best skill and all his strength; both of which he gave freely. "He once remarked to me how proud he was of the small percentage of deaths that occurred during his term of office" says a friend. He fulfilled the exacting demands of a war hospital with all characteristic zeal and thoroughness, but the strenuous and distressing work, together with the death of his son at the front undoubtedly weakened life's forces at an age when they should have been husbanded; and the world has paid the price in his too early death.

Apart from Sir Alfred's professional achievements—or perhaps we may say a large factor in the same—was his deeply religious faith. "He was what he was, and he did what he did because he was a Christian. He made no division between sacred and secular in his work, because to him all things were sacred" writes one who knew him well.

It is surely this blend of professional skill and simple religious faith that ranks a man at the peak of his profession. Without either factor something is lacking that makes for the highest development of manhood. Pasteur, Kelvin, Lister, of the recent past—Gould, of whom this is written, Kelly of Johns Hopkins of to-day—all along the thorny way of medical research and advancement, such names as these stand out as examples of that finest type of manhood—the skilled medical scientist, who is also a simple Christian.

Passing of "The Record"

The announcement that the Medical Record has ceased publication produces on us who have been welcoming its weekly appearance for many years, a sense of mild melancholy; for it will be missed. Its original material was interesting and helpful; its editorials timely and well written; its news items readable; its book reviews dependable.

Throughout the fifty-six years of its service to the profession, the Medical Record has had the same publishers and but two editors. Dr. George F. Shrady guided its course for the first thirty-eight years and was succeeded by his assistant, Dr. Thomas L. Stedman, who has long been dean of American medical editors, and widely esteemed. The famous old firm of William Wood & Company, will now devote its energies entirely to the publication of medical books in which service it has been engaged for 118 years.

It is interesting to recall that many of the most important discoveries and developments in the progress of medicine were first announced to the American profession by the Medical Record. These include Lister's method of antisepsis; Koch's discovery of the tubercle bacillus and that of tuberculin; the employment of cocaine in eye surgery; the Roentgen rays; the discovery of the antitoxin of tetanus and that of diphtheria; Madame Curie's discovery of radium and many others.

The Medical Record has been sold to and amalgamated with, the New York Medical Journal. For some months the Journal has been issued as a semi-monthly. The combined journals will continue to be so published; and will doubtless constitute an outstanding and cosmopolitan medical periodical.

Our best wishes are extended.

The Canadian Journal of Medicine and Surgery

Toronto ——— Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

*THE PROPHYLAXIS AND TREATMENT OF ARTERIO-SCLEROSIS

By Geo. S. Young, B.A., M.B., Toronto.

To begin at the beginning, there is one factor in the production of arterio-sclerosis over which we have no control. That is the quality of the blood vessels which we inherit. People may begin life with second or even third grade arteries. To prevent this it would be necessary, as Oliver Wendell Holmes put it, to choose one's ancestors for one hundred years back. Neither can we undo the arterial damage done by severe or prolonged infection. Nor can we reach the unknown cause which produces in certain apparently healthy people, that type of high blood pressure known as Hyperpicsis or Essential Hypertension, which eventually leads to Arterio-sclerosis.

Obviously prophylaxis must be based on the earliest possible recognition of any tendency to, or the actual presence of, arterio-sclerosis. Unfortunately signs might be detected while people are apparently perfectly well, but to find them early would necessitate a routine and careful examination of all people once, or better twice, a year. At present the first indications of on-coming arterio-sclerosis are frequently found by the Insurance Companies and to them we owe a great deal for the education of the public in preventive medicine. It is time, however, for the medical profession to take some part in this work and to impress upon people the importance of periodic examinations.

* Read before section of Academy of Medicine, Toronto, March 14, 1922.

There is an old saying that the cracked pitcher goes oftenest to the well. Of course this is only true with the proviso, "if the crack is recognized," because it is care that saves the damaged pitcher from disaster. No doubt second grade arteries may outlast those of the highest quality. It is merely a question of how they are treated. Only too often the man who has inherited first grade vessels wears himself out prematurely by very reason of his iron constitution. The woman with hypertension or arterial changes may live longer than the individual who with less arterial damage burns the candle at both ends. In these compensations there is the obvious moral that while it is a good thing to start with a fair reserve in the bank it is after all what you save that counts.

In any discussion of this subject what may be said of prophylaxis applies very largely to treatment of the disease. Further, to consider the treatment of various clinical types would require frequent repetition. For these reasons it will be more convenient to mention those therapeutic measures which are in common use and to discuss their application in different cases.

All treatment at present may be based on the following assumptions. Arterial damage may be caused by a hypertension of unknown origin, by physical or mental overstrain, by infections through the action of their toxins or by invasion of the vessel walls, by metabolic or endocrine disturbance, by chemical poisons like lead, probably tobacco and possibly alcohol. Treatment consists in the elimination of these factors so far as possible. Some of them may be dismissed with a few words. The worker in lead should change his occupation. As for tobacco its tendency to raise blood pressure is a reason for prohibiting it, but this must be subject to some modification. All do not react to it to the same extent. What is a moderate use of tobacco for most people may be excessive for a few. Some find in it a stimulant to which they resort with increasing frequency under stress of work, and here it must do harm. For others its use produces a tranquillity which probably outweighs its disadvantages. The individual should be studied (and not the case) before a limit is set to the use of tobacco; and a definite limit *should always* be set.

There is not much evidence that alcohol has any specific injurious effect on the vessel walls. Its harmfulness depends on the fact that it invites overeating and masks fatigue. Used to excess it is a potent factor in producing arterio-sclerosis since it removes the censorship of judgment and reason on which careful living depends. Essential Hypertension can only be treated by endeavoring to remove those causes which have a tendency to raise blood pressure. As stated before we can do nothing to prevent this type of hypertension, although much may be done to minimize its effects.

The role of infection is not easily estimated. There is no doubt about the part played by Syphilis. A Wasserman should be done in all cases and, if found to be positive, appropriate treatment should be carried out. Foci of infection should be searched for carefully, not forgetting out of the way places like the lungs and genito-urinary tract. If such a focus should be found it does not necessarily follow that an operation should be performed. The condition of the patient and the risk of operation, the outlook for adequate drainage and the possibility of secondary foci must all be considered.

Theoretically overeating strains the splanchnic blood vessels, raises blood pressure generally, and through upward pressure on the diaphragm impedes the heart's action. Faulty digestion and imperfect metabolism produce toxic substances. These considerations are sufficient to make diet a very important matter in potential or actual arterio-sclerosis. More attention should be paid to the quantity of food than its quality. Unless the patient is thin and anæmic he should live as near to his bare physiological requirements as possible. This will mean the cutting down of the amount of food in most cases and a slight loss in weight will show that the patient is following directions. It will be necessary of course to keep a record of the patient's weight from time to time. There is no doubt that great obesity puts an overload on the cardio-vascular system. In such cases weight must be reduced by the natural method, i.e., by cutting down the intake, with the aid, if necessary, of desiccated Thyroid in doses of not more than one grain three times daily. In treating thin and anaemic people it may be advisable to give a liberal protein diet, but each case of this kind is a special problem which cannot be dealt with

according to any fixed rules. The quality of the food is generally of secondary importance so long as a well balanced diet is taken. Proteins have long been on the black list and certainly most people eat more meat than is necessary. My own directions usually are: "Eat meat sparingly once a day and remember that fish and eggs are to be included in the term meat." It is understood that the patient should avoid the more indigestible foods and those which experience has taught do not agree with him. Tea and coffee on account of their blood pressure-raising properties should be limited.

The problem becomes more difficult with marked hypertension and danger signs. It may then be necessary, and especially if there are digestive symptoms, to reduce the food to a point much below the usual caloric requirements. For this purpose nothing is better than a sweet or buttermilk diet, taken in small quantities fairly often. In this way over-distension of the stomach is avoided, the amount of food can be checked up and its caloric value easily reckoned.

Muscular effort is accompanied by local rise in blood pressure and this may be carried to the point of producing arterial changes. This is well seen in the predominance of sclerosis in the limbs most used after years of manual labor. On the other hand muscular contraction is a physiological necessity for adequate circulation since the venous return depends on it to a large extent. Where is the line to be drawn as regards exercise in arterial troubzle? It may be stated at once that where there is a failing heart, or hypertension with cerebral symptoms, the patient should be put to bed. As for other cases no hard and fast rules can be laid down except that all exercise should stop short of dyspnœa. Probably the muscular effort of playing golf puts considerable strain on a damaged vascular system. If a patient could be placed in an easy chair out in the open air and sunshine two or three afternoons a week, and if during that time he did not think about his business and his troubles, but could be maintained in that joyous, free and easy mental attitude which seems to be characteristic of golf disease, then of course the chair would be best. But it can't be done and golf remains one of our best allies in treating vascular disease.

When the patient's occupation is one of manual labor one has to consider not only the actual condition of his arteries, but also his financial and domestic affairs. It has to be constantly borne in mind that anxiety and worry are just as harmful as physical work, with perhaps this difference, that work is more likely to damage peripheral vessels which are outside the danger zone. One very often has to be content with counselling against violent exercise and advising daily rest periods whenever possible.

The term "mental strain" is appropriately applied to such mental states or processes as are associated with those unpleasant emotions expressed by the words anxiety, worry, hurry, fear, anger, etc. All of them raise blood pressure either directly or indirectly. It is a common experience to find in healthy young men a systolic blood pressure of 150 which drops 30 points after all nervousness has subsided. Now there is only one way of removing or at least reducing mental strain, and that is by treating the mind. This may be attempted in various ways, all included under the term psychotherapy. The word calls up visions of psycho analysis and suggestion with or without hypnosis, and we are apt to forget that it has a far wider application. If in advising a patient to play golf we have in mind the relief of mental strain we are practising psychotherapy. If the patient is worrying about the outcome of his disease and we reassure him, if we carry him along through the painful process of giving up an injurious habit, if we inveigle him into cultivating a hobby which will keep his mind off his troubles, real or imaginary, if we induce him to give up his strenuous business life—in all psychotherapy is involved. Our success will depend on our knowledge of applied psychology.

Two years ago a patient was referred to me on account of hypertension. He looked the picture of robust health and was leading a very busy life with a good deal of overtime. I endeavored to impress on him the necessity of giving up part of his business, but failed. He went back home and continued to work till midnight as before. Last summer he died after a period of progressive myocardial failure. No doubt his life

would have been prolonged if he had followed my advice. It is easy to say that the man had himself to blame. But was there something wrong with the psychotherapy? *The advice should have carried conviction.*

Of course we all practise psychotherapy consciously or unconsciously every day. Too often our methods are summed up in the phrase "jollying them along." What I wish to emphasize is the need for a psychotherapy, not carried out in a haphazard manner, but by a systematic plan which must vary with every individual case. It is worth noting that the surgeon takes infinite pains over every item of his technique. No detail is too trivial for his attention; and now in the last few years he has been studying the psychology of his patient with the same fine care for details. One has only to think of Crile's work on Anoci-association to realize how far the surgeon will go in his endeavor to eliminate all mental influences which may mar his operative work.

To return to the psychotherapy of arterial disease, the mental strain of work varies greatly with the patient's temperament. Some play the game with no waste of energy. Others work with the throttle wide open whether the clutch is on or off. The amount of work, the condition under which it has to be done, whether there are hurry and worry, frequent interruptions, tense interviews, troublesome employees—these are all points which should be considered in deciding whether the patient shall stop work or put in shorter hours. There may be worries outside of business. They may be on the surface or repressed, but in any case they should be tactfully investigated. Unfortunately certain anxieties may have causes which cannot be eliminated. Then one must try to inculcate a philosophy of life which will enable the patient to meet these inevitable things with equanimity.

In cases of Essential Hypertension with or without its sequel arterio-sclerosis and in other types of arterial disease Potassium Iodide has been given very generally. I have been accustomed to prescribe it in small doses, not more than two or three grains thrice daily, and to continue its use for long periods (in one case for eight years) with interruptions for short intervals. Until recently this treatment was based entirely on empiricism, the explanations of its action being more or

less fanciful. Lately it has been shown that solutions of Potassium Iodide applied locally dilate the capillaries. Possibly this occurs when Pot. Iodide is given internally. It must be admitted that improvement following its administration is indicated clinically rather than by any marked lowering of the blood pressure. In cases of obesity Thyroid may be substituted for Potassium Iodide provided the case can be kept under observation. In hypertension at the menopause Ovarian Gland substance in five grain doses twice daily or Thyroid in small doses are worth trying.

It is important that the bowels should move daily. In low or normal tension cases this is best secured by diet and liquid paraffin. In cases of hypertension a morning saline once or twice a week with a weekly dose of calomel may be advisable.

It is frequently necessary to treat special symptoms of which headache and dizziness are most common. Where there is no hypertension or even when it does exist with a laboring heart Digitalis in moderate doses may give relief. In other cases of hypertension vaso-dilators like Nitro-glycerin given in doses large enough to produce a physiological effect may relieve headache. Experience generally is against the routine use of vaso-dilators in hypertension. The reason for this lies in the belief that the hypertension is a necessity under the existing conditions and should not lightly be tampered with. Often a nose-bleed will relieve headache and dizziness and several times I have seen immediate relief in full blooded patients from venesection. The effect on blood pressure is temporary, but the relief seems to be more lasting.

Society Proceedings

THE FORTY-SECOND ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION

We take this opportunity of congratulating the Officers of the Ontario Medical Association on the great success of the 42nd annual meeting, which took place in Toronto May 29th to June 2nd inclusive. The attendance was undoubtedly a record one, the registration having reached almost the 650 mark. The Executive of the Association deserve a great deal of credit for the work done by them during the past year, each and every Committee having worked very hard to secure success.

The meeting opened on the evening of Monday, May 29th, at Convocation Hall, University of Toronto. There was a splendid attendance, a large number of laymen being present to listen to the address of Dr. Macfie Campbell, of Boston, on "The Modern Conception of Mental Disease." We hope to have the opportunity of publishing this address at a later date.

On Tuesday, May 30th, there was a meeting of the Committee on General Purposes, a great deal of the Association's business being discussed. In the evening a Round Table dinner was held at the Academy of Medicine, the accommodation in the auditorium being taxed to capacity. The chair was occupied by the President, Dr. F. J. Farley, of Trenton. A large number of subjects were discussed by members present, who were confined to three-minute addresses.

Further business of the Association was taken up the following morning and was followed by the address of Dr. Allen Krause, of Johns Hopkins University, Baltimore, his subject being "The Changing Phase of Tuberculosis."

The address in Gynecology was delivered by Dr. Reuben Peterson, of the University of Michigan.

The Association dinner was held at the King Edward Hotel on the evening of May 31st and was undoubtedly one of the most enjoyable functions held for many years. (Hearty con-

gratulations are due Dr. R. T. Noble for his work in this connection). The Presidential address was delivered that evening, further reference to which will be found on another page.

The Sectional Meetings were of particular interest, the majority of the papers being of exceeding interest.

The Address in Medicine, to which reference is made elsewhere in this issue, was delivered by Dr. Thomas McCrae, of Philadelphia. The same afternooon a very successful and enjoyable garden party was given by Dr. and Mrs. Herbert Bruce at their beautiful home in North York. The weather was ideal and the visitors from out of town. as also the city members, had an exceedingly pleasant time.

The Address in Surgery was delivered on Friday by Dr. Neil J. McLean, of Winnipeg.

The Exhibit Hall was of more than usual interest, quite a number of the most prominent Physicians' Supply Houses being represented, including:

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Burke, A. C., X-ray Appliances, Toronto.
Canada Chemical Works, Montreal.
Canadian Milk Products Co., Toronto.
Cameron Surgical Speciality Co., Chicago.
Consolidated Optical Co., Ltd., Toronto.
Denver Chemical Co., New York and Montreal.
Gilmour Bros., Horlick's Malted Milk, Montreal.
Hanovia Chemical and Manfg. Co., Newark.
Hartz Co., J. F., Toronto.
Ingram & Bell, Toronto.
Lavoris Chemical Co., Ltd., Toronto.
Lippincott Co., J. B., Montreal.
Malt Product Co. of Canada, Toronto.
McAinsh & Co., Toronto.
McClelland & Stewart, Toronto.
Radium Chemical Co., Pittsburgh.
Radium Company of Colorado, New York.
Roman Meal Co., Toronto.
Shuttleworth, E. B. Chemical Co., Toronto.
Thompson Plaster X-ray Co., Leesburg, Va., and Toronto
United Typewriter Co., Toronto.
Wingate Chemical Co., Ltd., Montreal.

Wood, W. Lloyd, Ltd., Toronto.

CONTRIBUTORS.

Carnahan's Drug Store, Toronto.

MacMillan Co., Toronto.

The thanks of the Association are undoubtedly due to the University of Toronto for their courtesy in loaning the different buildings for the Meeting.

IN HIS PRESIDENTIAL ADDRESS

Dr. Farley entered into a defence of the full-time professorships in medical faculties, especially in the University of Toronto. He advocated the union of the Canadian universities to build up a national school of medicine of our own, with Canadian post graduate work, and denied most positively that Canada and the United States are medically one country.

Other important recommendations that seemed to receive the support of the medical men were the establishment of county laboratories for the country physicians, properly trained, whole-time county medical health officers, and trained municipal matrons. More justice for the country practitioner and appreciation for his invaluable work characterized Dr. Farley's address.

"There has been considerable controversy of late respecting the teaching of medicine and the constitution of our medical teaching bodies," the president explained. "In order to gain first hand information I requested our provincial universities to give me a report of their activities." These he proceeded to read.

The report from Queen's University, at Kingston, which came first, reported an entirely satisfactory state of affairs, with a full time system of professors in vogue for many years. But, stated this report of Dean J. C. Connell, "Queen's faculty has always kept in mind that the primary purpose of a medical school is to train practitioners for the medical profession."

A pointed criticism at Canadian universities which receive foreign grants seemed to be contained in the Queen's report. "Queen's has accomplished its financial salvation without assistance from foreign corporations," reads the dean's report. "The medical school is a definite part of the university and is supported according to its requirements. It is recognized by

the Ontario government as part of the educational system of the province, and is entitled to receive money grants both for development and maintenance."

The reorganization of the Faculty of Medicine at Toronto University during the past two years is explained by Dean A. Primrose. "First, the department of medicine was placed on an efficient basis; this was made possible by the generous gift, in endowment of the department, by the late Sir John Eaton. The department of obstetrics and gynecology was organized upon similar lines. The last of the three great clinical departments, namely, the department of surgery, was put upon a similar footing at the beginning of the present session. The necessary funds for this purpose were made available through the Rockefeller grant.

The numbers of teachers in the Toronto Faculty of Medicine under the full time professors are, according to Dean Primrose, 45 in medicine, 48 in surgery, and 11 in gynecology and obstetrics. This staff is made up principally of part time men with a few junior full time assistants.

Junior full time assistants serve their term as junior and senior internes in the hospitals, and in addition spend a year in the laboratory after graduation. "This means that they have spent three years in hospital and laboratory work after graduation."

"Under ordinary circumstances," says Dr. Primrose, "such a man must go at once into practice in order to earn a living. He usually has to go to some small town where he is completely out of touch with university work. If such a man shows promise as a teacher and an investigator, the junior full time appointment gives him an opportunity of carrying on his work. He begins with a salary of $1,500 to $2,500 a year, and, for the first year he devotes his whole time to clinical and laboratory research and teaching. If his work has been up to standard he may be kept on for one or two years more at a slightly increased remuneration, with a maximum of $2,500. In these succeeding years he is allowed to devote two hours a day to private practice. In this way, he gradually builds up an outside connection, so that at the end of two or three years he is in a position to relinquish his full time appointment and come on to the part time staff."

"In the course of time," the dean points out, "if this scheme is carried out in its entirety, the whole of the teaching staff in the clinical departments will be composed of men who have gone through this training, the senior members composing the great part of the staff being on a part time basis and the junior men in training on a full time basis. The scheme is in this way progressive, providing always adequately trained junior men to take the place of the seniors as they retire on account of age or other causes."

A similar state of progress was also reported by Dean Paul McKibbon of the Western University at London, Ontario.

In most decided tones, Dr. Farley stated: "After making as complete a survey as possible for one in my position, of the work being carried out in different universities, and the system of instruction used, I am convinced that our universities are not copying either German or American methods, but are developings of elaborate medical apparatus.

In welcoming the lecturers from the United States, President W. H. Harris, of the Academy of Medicine, said, in the course of his remarks, that the physicians of the association realize that humanity is our greatest asset. He paid tribute to our health officer, Dr. C. J. Hastings. "If I may be permitted to say it, I think that in these days of strain, strife and social unrest, we doctors should not forget our great ideals of the past, and should put aside the commercialism that is apt to sweep away some of our finest ideals."

THE ADDRESS IN MEDICINE

Dr. Thos. McCrea, a graduate in medicine of Toronto Universities in the early nineties, for many years on the staff of Johns Hopkins and now Professor in Medicine of the Jefferson Medical College, one of the best teachers of medicine on the continent, delivered the address in medicine at the meeting of the Ontario Medical Association.

He laid great emphasis on the value and importance of proper diagnosis in all cases, pointed out the error of drawing conclusions without a thorough examination of the patient's history, and advised the medical men to put greater faith in their own powers of observation than in the mechanical findings of elaborate medical apparatus.

Referring to a remark made by the Chairman, Dr. F. J. Farley, that the speaker was one of those who had left this country to go to the United States, Dr. McCrae said that he hoped he still had a part in Canadian medicine and declared that he was proud of the fact that he was a prodigal of Canadian medicine, for men in his position might change their skies but not their hearts. In commenting on the presence of his old preceptor in medicine, Dr. Angus McKinnon, of Guelph, and of Dr. Alex McPhedran, one of his old teachers, the speaker said that he heartily recommended the system of a student spending some time working in contact with a preceptor.

"Every art," said Dr. McCrae, "tends to be destroyed by the machinery which it creates; the tools of the trade become more important than the trade itself. There is no lack of examples and perhaps our legal friends would agree that it often seems as though the machinery and procedure of the law have come to mean more than the basic principles of justice. Medicine is no exception and it seems worth while considering whether we are not in danger of making more of the machinery than of the art itself.

"For the majority of the profession the chief object is to care for the sick and to prevent disease. Naturally, we desire to have every aid in doing this, and many of the methods necessary are complicated, requiring special training and elaborate apparatus; witness the Wasserman reaction (a blood test) and the electrocardiograph (an instrument for studying the heart action). But why should we stand in such particular reverence before them? They may be of the greatest assistance and a proper diagnosis may be impossible without them, but they should be used and kept in their place.

"It is a constant struggle for teachers to keep their students from making more of the machinery than of the art," he continued. "There is a certain type of student who when asked, for example, the diagnostic points of thoracic disease answers, first that an X-ray examination should be made. This may be necessary, and may be the last court of appeal, but that is no reason why the usual methods of examination should not be carried through first.

through disuse. Perhaps the statement that the powers have atrophied through disuse is not always correct—they may never have been present. If this is the case, it may be difficult to do much, but for the majority the matter is largely one of training, and here the teachers have a heavy responsibility.

"I wish to dwell particularly on the errors made in what may be regarded as comparatively simple diagnosis," he went on. "I have been interested in finding what common condition has been most frequently overlooked in patients whom I have seen in consultation. It is the presence of fluid in the pleural cavity, and you may well ask why this should be. The answer lies partly in the frailty of human nature, for it is rarely due to lack of knowledge. Here, if we depend upon our own faculties and use them, there should be fewer errors.

"We all agree that thoroughness and efficiency in our everyday work are to be striven for in every way— not only for the good of the patient, but for the sake of our own development and the reputation of the profession. Careless work harms all of them. How are we to reduce it? I am willing to accept the responsibility of the teacher, but never forget that he has to deal with diverse material and has always the problem of deciding whether he will give attention to the better or poorer students in his groups.

"If we are to improve our efficiency in caring for the sick, we must endeavor constantly to improve our ability to recognize what we have to do. My feeling is that one very important thing for the profession to-day is to make the effort to get back to fundamentals. Proper methods and thoroughness are as important to-day as they were 50 years ago, and as they will be 50 years in the future."

In speaking of the importance of obtaining a thorough history of the patient, Dr. McCrea said: "It is a constant exercise in one's powers of adaptation and knowledge of human nature to suit the method of history taking to the individual." He commented on the fact that several men taking the history of the same patient would often get different results, but advised that, although history taking might seem more or less of a bore, the doctor was really studying the most

important symptom of all—the patient himself. The patient should be approached with intelligent curiosity as representing an unsolved problem.

He advised against the misuse of words, and warned the doctors to be careful not to accept terms given by the patient himself which have a variety of meanings, or might be misconceptions. He also advocated a careful and thorough study of the sympathetic nervous system in order to facilitate the location of the real symptoms.

He suggested that in studying the cause of pain, a useful method is to employ the system of putting down all the possible anatomical sources of the pain, and finally narrowing the cause down to a few sources. He also pointed out that it must be recognized that the situation of the pain and the seat of the diseased process causing it might be far apart.

In the course of his address, Dr. McCrae mentioned that he prescribed Kipling's Kim to his students as one of their text-books in diagnosis, because it taught accurate observation and the value of being particular as to what one said.

He declared that there was no lack of medical problems to be solved, and that that should serve as a stimulus to the doctor to do his part in making them clear. He met with much applause when he expressed the opinion that the doctors should all regard themselves as in their last year of studentship.

On the closing evening of the association, one hundred of Mr. Cameron's old students dined in Hart House, and presented a painting of him by Varly to the University, Prof. C. L. Starr making the presentation, and Sir Robert Falconer accepting same for the University. Dr. C. K. Clarke presided.

"The toast to "Our Alma Mater" was given by Dr. Primrose and responded to by Sir Wm. Meredith. The toast to "Our Guest" was proposed in a felicitous vein by Principal Hutton, and supported in happy speeches by Dr. Thos. MacRae and Prof. A. B. Macallum. Reference was made to Prof. Cameron's long association with the university and his sacrifices on its behalf.

Sir Joseph Flavelle was also present. The University of

Toronto honored itself by accepting the portrait of one who is a shining light in the profession—we only wish that the painting was a truer portrayal of the painter's subject.

Dr. E. R. Secord, of Brantford, was elected President of the Ontario Medical Association for the next association year. First Vice-President last year, Dr. Secord steps into the place of Dr. F. J. Farley, retiring President. Dr. Fenton Argue, of Ottawa, is First Vice-President, and Dr. Geo. S. Young, of Toronto, Second Vice-President.

Five of the ten counsellor representatives of districts are new men. These are T. H. Middleboro, of Owen Sound, who takes the place of Dr. Geo. S. Burt in district No. 3; Dr. Robt. T. Noble, of Toronto, succeeds Dr. Geo. S. Young in district No. 5; Dr. Sparks, of Kingston, takes the place of Dr. H. A. Boyce in district No. 7. In district No. 8, covering Ottawa, Dr. Hugh Laidlaw, of that city, succeeds Dr. J. Fenton Argue, and Dr. John Pratt, of Port Arthur, becomes counsellor in place of Dr. E. B. Oliver in district No. 10.

The five counsellors who will stay on, are: Dr. R. G. R. McDonald, of Sarnia, district No. 1; Dr. Weston Krupp, Woodstock, district No. 2; Dr. F. W. E. Wilson, Niagara Falls, district No. 4; Dr. E. McQuade, Trenton, district No. 6 and Dr. Edgar Brandon, North Bay, district No. 9.

FACULTY OE MEDICINE APPOINTMENTS

The Board of Governors of the University of Toronto has ratified the following appointments in the Faculty of Medicine:

Dr. W. B. Hendry succeeds Dr. B. P. Watson as head of the department of gynaecology and obstetrics on the eve of the latter's departure to assume the chair in that department at the University of Edinburgh; Dr. Perry Goldsmith is appointed to the chair of oto-laryngology vacated by Dr. Gibb Wishart, who has been obliged to resign on account of his health; Dr. W. H. F. Addison is appointed associate professor of anatomy. Dean Primrose is now consulting surgeon at Toronto General Hospital and also dean of the Medical Faculty. Dr. D. N. Maclennan is first assistant to Dr. J. M. MacCallum, who now enjoys the position of "Chief Log-Roller" to the Department of Eye and Ear.

Selected Articles

THE NURSING PROBLEM

By W. D. Alsever, M.D.,
SYRACUSE, N.Y.

We have become so accustomed to obligatory education in our public schools that we accept the plan as a matter of course. The cost of public schools is assessed not only on the parents of children who attend but also on other citizens, even including old bachelors and old maids. Such assessment must be reasonable or it would not continue. The object of obligatory education is to produce better citizens, and consequently to make our country safer and more comfortable to live in. This advantage is shared by all people, whether or not they have children, and consequently it is fair that all should be taxed. Similarly, the children who attend the schools, having been prepared for the battle of life through the activity of the government, are in a corresponding degree in debt to the government. This debt can be paid only through good citizenship, that is through sustained and self-sacrificing effort for the welfare of all. No one can escape such civic obligation.

A young man pays his tuition at a medical college and, after several years' work, becomes a doctor of medicine. But the college meanwhile has acquired a deficit, for the tuition fees are not sufficient to maintain medical schools. Deficits are met through gifts from public spirited citizens. Such use of money is wise for it insures more and better doctors than would otherwise be the case, thus safeguarding all people including those who make the gifts. Every medical student graduates in debt

to the community even though he has paid his tuition. His debt can be paid, and is expected to be paid, through making his skilled services available to everyone and at all times. When a doctor is needed it is manifestly his duty either to go or send. The only satisfactory excuse is physical inability. I am happy to say that, as a rule, doctors perform this civic duty.

A young woman enters a nurses' training school. She pays no tuition; on the contrary she receives board, lodging and a small salary. However she contributes her labor in greater degree than is needed for her education and so, for all practical purposes, she pays tuition. That she does not pay the cost of her education may be inferred from the fact that hospitals, like medical colleges, have regular annual deficits which are made up by the generous well-to-do. Consequently all nurses graduate in debt to the community. They rest under the moral obligation to nurse the sick to the extent of their ability. Were it not so, general public support of nurses' training schools would be unjustifiable. There is a public demand for nursing as well as medical care of the sick, and public support of hospitals grows out of it. If hospitals, doctors and nurses should fail to give the public reasonable care in sickness, then public support of them would eventually be withdrawn. The public demands service and is certain to get it. That person who enters medicine or nursing for the sole purpose of making money has adopted the wrong course and is not honest in accepting the education offered.

We all feel that the best possible nursing care is desirable, and we feel it the more keenly when we ourselves or those near to us are the patients. At present a fully trained nurse receives $5 or more per day and board. Under the 12-hour duty system it often happens that one nurse is of comparatively little value, and we choose between two nurses or none. If the patient is in a hospital the hospital bill must be added and, usually, the doctor's bill as well. It is generally known that doctors' bills vary according to the standing of the doctor and the ability of the patient to pay. Hospital bills vary according to the rooms chosen. Nurses' fees, however, are fixed. There is much to be said in favor of uniformity of nurses' fees and it has

the backing of established custom. For the purpose of this discussion, at least, uniformity of nurses' fees may be accepted as proper.

It will be seen that sickness, if properly cared for, is expensive, yet within the easy reach of the well-to-do. Through our public charities good care is also within the easy reach of the very poor. For the great bulk of the people, who are self-supporting and who resent charity, the proper care of sickness is a heavy burden. Yet this middle class comprises about 90 per cent. of the people, it is the bulwark of the nation, the great men of to-day have come from it, and its children will furnish the great men of to-morrow. It must not be pauperized nor humilitated. Five dollars per day is an ordinary wage for a head of a family. The man who nets $10 per day is doing very well indeed. To ask such a man to spend five or ten dollars per day and board for one or two nurses, in addition to the other expenses of sickness, is to ask something which is clearly out of proportion to his income. This does not mean necessarily that graduate nurses charge more than they are worth, but it does mean that under the present system trained nurses are not available for the mass of the community.

There are other minor phases of the nursing problem which may properly be mentioned. At present there are not enough nurses to supply the need even if twelve hour duty was abandoned. Twelve hour duty has laid a heavy burden on the community without lightening the burden of the nurses in proportion. Practically every mother does twenty-four hour duty. As a routine procedure twelve hour duty for nurses is wrong. It should be reserved for the more burdensome cases only. The custom of employing trained nurses for wealthy semi-invalids is unfair if these nurses are needed by sick people. In a large percentage of cases proper treatment depends, quite as much on a trained housekeeper as on a trained nurse. Commonly, graduate nurses do no housework and consequently they miss many opportunities for relieving the sick. The mental state of both patient and family is an important and much neglected factor in the treatment of disease. The sick housewife is disturbed and restless when she knows the house is running badly, and she is all the more distressed when she realizes that the

household cares have become heavier through the presence of a guest—the nurse. If the patient is husband or child, the housewife's cares and duties are greatly increased and help of any sort is greatly appreciated. It is difficult to explain the ethics of a situation which overburdens the mother with housework and permits the nurse to sit in a comfortable chair doing fancy work. Although I personally know that such situations have occurred, yet I also know that they are rare. I can say with much pleasure that I have often known graduate nurses to make themselves useful in all possible ways after the patient had been cared for. Nurses who began training in their teens and who have done nothing but nursing since, naturally cannot be expert housekeepers and we must not expect too much of them.

A recent development which makes the solution of the nursing problem more difficult is the choosing of cases by nurses. It is proper for some nurses to limit their work to special fields in order to increase their efficiency, for example operative cases, obstetrics, quarantinable diseases, etc.; but the majority of nurses should hold themselves in readiness to accept calls as they come. It is their civic duty—should they fail in it the nursing profession must descend from the high place it has occupied. Every doctor and many families have known of nurses refusing calls because the case was out of town, because the diagnosis was unsatisfactory, because the disease was mildly contagious although not quarantinable, because there were no servants in the house, because the doctor or the family were not agreeable, because the case was difficult, because it was not in a hospital, because only one nurse could be afforded, or because it was holiday time. These excuses are mentioned with chagrin and shame. However, the spirit of human kindness is so strong in all people that, in my opinion, these abuses will be corrected as soon as nurses understand that public opinion condemns them.

Many of the phases of the nursing problem do not, in my opinion, call for criticism of the nurses themselves. They rather are part of the trend of the times and have involved nurses no more than other groups of workers. Rome fell after her people were surfeited with power and wealth. The United States has grown so strong and rich that we are seeking ease

and pleasure, forgetting our sturdy ancestors who vivified the doctrine that the greatest health, wealth, and happiness comes through work and that all work is honorable. The most conspicuous exponents of the new order are the labor unions who use force to the limit to raise wages and shorten hours of work. Their doctrines of the closed shop and restriction of the number of apprentices are pernicious and unfair, and must be overcome or we all including the unions will suffer. However much we may evade it temporarily, yet in the end the law of supply and demand controls. At present there is a demand for more extensive and less expensive nursing among middle class people and undoubtedly this demand will somehow be supplied.

The question naturally arises "who should solve this problem?" It really is everybody's problem, but everybody's problem is nobody's problem. Practically all public health problems have been solved by doctors, they being the ones best trained for the work. They are proper judges of efficiency of nursing in cases under their care, and they may well qualify as advisers in the nursing problem. Perhaps nurses themselves should take the lead in this matter for they already know more about it than do any other group of people. It is another phase of their civic duty. There is now a strong tendency to regulate the practice of nursing by law. The more the law restricts the freedom of people in general to qualify as nurses, the greater the obligation on those who do qualify to see that the community is well nursed.

There are at least three possible plans for improvement. First, the salaries of graduate nurses might be lowered. This is not to be advised for it would probably be unfair to the nurses, it would no doubt diminish the number of nurses in training, and it might eventually diminish the number or quality of those highly trained women needed for hospital superintendents and teachers. Second the field for graduate nurses might be limited to institutional and other salaried positions and to care of the well-to-do, thus leaving a large field for women who are less highly trained nurses but better housekeepers and who can afford to work for less money. Various attempts have been made to train such nurses, but, as yet, no plan has met with universal favor. New York State and California now license

so-called "Registered Nurses" and "Trained Attendants." They continue to permit the care of the sick by other people regardless of their training and experience, that is by those who are known as "experienced" or "practical" nurses. "Registered Nurses" are those who have completed courses in training schools approved by the State and have conformed to the few rules required for license. Practically they comprise those who were formerly known as "graduate" or "trained" nurses. "Trained Attendants" must have completed a short course (6-12 months) in a hospital approved by the State and conformed to the rules required for license. It is expected that hospitals of small capacity, hospitals for chronic cases, for the insane, for the tuberculosis, etc., and possibly the larger general hospitals, will establish approved courses. These new laws have been in effect too short a time to know how great will be the supply of "Trained Attendants," but as yet hospitals have shown little interest in this type of nurse. Being deprived by law of the designation "nurse," "Trained Attendants" will probably be somewhat handicapped in prestige. In the English language from time immemorial the word "nurse" has meant any one who cared for the sick and probably its meaning cannot be changed by law. If custom continues to give the meaning to words, then "Trained Attendants" will be known popularly as nurses, or few people will become "Trained Attendants." In any event it is highly desirable to develop a large group of nurses who have had short hospital experience. The practical problem is how to get as many people to aspire to be "Trained Attendants" and how to get hospitals to train them. Whether the advantages of a legal classification of nurses are greater than the burden and expense of registration is yet to be determined. Undoubtedly we always will have with us the nondescript group known as "practical" nurses and many such nurses continue to be of inestimable value. Their housewifely skill and their willingness to do whatever may be needed to overcome disease are assets which loom large.

Some attempts have been made to train nurses by instruction outside of hospitals. The National Training School for Certified Nurses at Albany offers a six months' course and the Chautauqua School of Nursing gives a course by mail. Fol-

lowing the influenza epidemic the Chicago Training School for Home and Public Health Nursing was organized. It gives a two months' course consisting of lectures and demonstrations. In two years it has graduated 4,000 women, averaging over 40 years of age, half of them married or widowed and most of them experienced housekeepers. However great the defects of such schools may be, their graduates are better qualified for nursing than was the case before they carried on their studies. It is beyond question that a capable woman can become a good nurse after a few months' training, for many such women have demonstrated in actual practice that they *are efficient.* Charging usually twenty or twenty-five dollars a week and accepting twenty four hour duty, they are available to many families who find it difficult to maintain trained nurses. Graduates of these schools who do not practise nursing are so useful in their own homes that nurses from the outside are seldom needed. Evidently the community is helped by these schools and, until better sources for moderate priced nurses are operating, such schools should be continued. Graduate nurses need not fear competition for there is plenty of work for all.

It has been suggested that the need of most homes for nurses can be diminished by giving courses in nursing in the public schools, just as cooking and sewing are taught. There is much to be said in favor of this plan. Surely it is just as reasonable to teach school girls the care of the sick as to teach them the other housewifely arts. Semi-public institutions, such as the Red Cross, have given courses in practical nursing. Considerable benefit and no harm has resulted.

An attempt is being made to increase the number of pupil nurses in training schools through shortening the course to two years or thereabouts. Probably this can be done without lowering the efficiency of the graduates, but the cost of their education will grow. Increasing the numbers of graduate nurses will help to solve the nursing problem, but unless they work for lower wages the mass of the people will not be benefitted. Lowering the pay or shortening the training of graduate nurses would be inadvisable if loss in quality should result, for

difficult cases will continue to demand all possible skill and the maximum of training and native ability is needed for superintendents and teachers.

A third possible plan for relief is the use of paid, fully trained, visiting nurses. During a daily visit a nurse can give special treatments, bathe and otherwise care for the patient, take pulse and temperature, and advise regarding diet, ventilation, care of excreta and general hygienic questions. Much valuable public health information can be diffused through neighborhoods by such nurses. Their visits are especially valuable to families who cannot afford resident nurses or who live in apartments so small that another person cannot be housed. In order that the work can be done for moderate prices, the patients must live near together. That is to say visiting nurses are practicable in densely populated communities only. They can never supply the need if distances are great or if continuous care is needed.

All these plans for relief are imperfect, all have their advantages. They give abundant material for discussion. The nursing problem is vital just now and demands careful consideration by all people, but particularly by nurses and doctors. In studying it one must remember that the fundamental motive in nursing is to relieve suffering—this includes not only the actual care of the patient, but also the relief of the anxious and overburdened family. A true nurse must have some of the spirit of a crusader or a missionary. She must conduct herself so that other people will want to work with her; so the family will be glad she came and sorry she went away. Kindness of heart, secretiveness, good breeding and general education are important. We all need to remember that the greatest pleasure and comfort in life come not through money, but through work well done. It happens that the nurses' opportunity for service is notably great.

The question naturally arises what can we, as doctors, do to help solve the nursing problem, and the answer is not easy. Public sentiment has not crystallized around any of the proposed plans for relief. Our civic obligations lead us to investigate the nursing situation just as surely as they lead us to study other public health questions. Our moral responsibility

is fixed and unavoidable. We are just as much responsible to the public for the nursing care we accept as we are for the quality of the drugs we administer or for the sterility of our hands when operating. The question is not "ought we to do something," but "what can we do?" As with other unanswered public questions one thing of value which every one can do is to talk, and everlastingly to talk. Out of the meeting of many minds, which is the sure result of general public interest, will come the answer to this question. You and I can help bring out the best ideas through conversations with our acquaintances, particularly with nurses, and through discussions at formal meetings. Only little readjustment will be required to develop nurses according to any of the proposed plans. The problem resolves itself into agreeing on the best method of supplying moderate-priced nursing.

When it becomes generally known that the way is open for the training of reasonably satisfactory nurses in short, inexpensive courses, there will then be no difficulty about candidates, for the returns in self respect and money will be attractive.

Hospitals hold their pupil nurses for several years in order to train them in various technical details and in order to take advantage of their services. Just as special preparation is required for public health nursing, so it is needed for private family nursing. Hospital training makes a nurse competent to establish an operating room in a house, but does not prepare her to care for ordinary sickness without upsetting a home. Fifty years ago girls were taught housekeeping in their own homes and nurses were competent housekeepers first. Such is not the case now. Florence Nightingale lifted the nursing profession to the highest moral plane. Relief of suffering was her sole object. When she went to the military hospital at Scutari her first and most useful work was in making the hospital wards clean and free from vermin, the patients' bodies and their beds clean, and in serving good food. This work, done in considerable part by her own hands and in spite of the opposition of the military authorities, greatly increased the percentage of men returned to duty. It was tremendously valuable nursing, but it was housekeeping.

Let us do what we can to develop a class of nurses who know a little of the science and much of the art of nursing, who are ready to do whatever may be needed to make the sick well, who think less about the infectiousness of disease and more about the contagiousness of the Golden Rule, who are like mothers or sisters to their patients, who are true disciples of Florence Nightingale.—*Medical Record.*

Book Reviews

A Text Book of General Bacteriology, by Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in the Rush Medical College. Seventh edition, thoroughly revised and fully illustrated. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1922. Price $5.50 net.

This work, now in its seventh edition, is a standard text book both for graduate and undergraduate. It is well written and easily read. Bacteriology has become more and more an exact science in recent years and as a result books have tended to become too technical for the average reader. The author however has not confined himself to what might be called the purely laboratory aspects of the subjects and while he has dealt with these in a most satisfactory measure, he has incorporated throughout the book much material of general medical and biological interest.

The discussions of the recent investigation on influenza and on the pneumococcal and streptococcal infections are especially valuable in this edition and will repay careful study. The prevalence of ancurobic wound infections during the great war has awakened a great deal of interest in these organisms; the chapter on the subject is a most instructive review of this rather unfamiliar field. The book can be highly recommended.

The Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods (with notes on Salvarsan), by Reginald Hayes, M.R.C.S., etc. Fourth edition, revised. Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London, England. 1922. Price 4/6 net.

This book is chiefly concerned in advocating mercurial inunction as the safest and most powerful method for the treatment of syphilis in all its stages. Care is taken to point out that other drugs may be used as assistants, but that in the majority of cases the administration of mercury is the most important factor in effecting a cure. The method employed at Aachen possesses the advantage of skilled rubbers, attention to detail, and supervision of experts. The same treatment may be carried out at home when the physician, patient, and rubber co-operate.

Practical Psycho-analysis—An Introductory Handbook, by H. Somerville, B.Sc., F.R.C.S., L.R.C.P., M.R.C.S., London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, W. C. 2. 1922. All rights reserved. Price 6/- net.

This little work contains a good many histories of cases of nervous patients treated by psycho-analysis. It then, logically, devotes a chapter explaining how the analysis is done. In this stress is laid on the importance of gaining the patient's complete confidence. The examiner needs sympathy, sincerity, and tact. The author makes much of dreams in his anamnesis. He pays tribute to Ernest Jolnes, and other prominent psycho-analysts who have elaborated more fully on the subject than he has.

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CONTENTS

EDITORIAL

	Page
Symposium on Cancer	39
Medical Health Officers' Association	44
Medical Reunions	48
Angina Pectoris	49

ORIGINAL CONTRIBUTIONS

Hodgkins Disease, by Julian Loudon, B.A., M.B.,	54
The Nurse of the Future, by H. C. Wrinch, M.D.,	59
House Surgeons of T. G. H., 1890-1891, by T. S. Cullen, M.B.,	66

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VOL. 52 TORONTO, AUGUST, 1922 No. 2

Editorial

Symposium on Cancer

The *Medical Press and Circular* has devoted a recent number (14, Vol. CLXIV) to a discussion of cancer. The editor points out that cancer growth is peculiar in that while the nutritive activity of the part is increased, sometimes enormously, the change is a retrograde one—the tumor tissue being quite different from the surrounding tissue but also of inferior evolutionary value.

Normally the fixed epithelial and connective tissue cells capable of multiplying, are immersed in plasma in separate chambers. Due to some inhibitory influence or absence of irritation they do not multiply. A release of restraint may permit these cells to break loose and multiply—producing malignant growth. These loose "rebel" cells may invade

the lymph stream and form foci in other parts of the body. Or, these fixed cells may be lashed into activity by some irritant—a microbe actively multiplying.

The epitheliomata tend to form a crude immature kind of gland—a possible ancestral form. What produces the fibrous stroma, the new blood vessels and lymphatics in these new growths? *A priori* the parasitic origin of cancer would seem to be most likely; but experiment yields little or no support to that theory.

Another query the editor puts is: Why is there not (but rarely) more than one primary growth in the same patient?

Percy Dunn says we must first be able to solve the problem of normal growth before we can explain the growth of tumors. Laennec first pronounced malignant disease to be a morbid entity. He, however, mistakenly, included tubercle, though his British contemporaries did not agree. The general belief was that cancer was due to a deposit from the blood. Sir James Paget concurred with his view. Lobstein made an analysis of 142 grains of scirrhus into 20 of gelatine, 20 of fibrin, 10 of fatty matter and 20 of water. This knowledge did not help out. Paget called the connective tissue group (by Virchow, later named sarcomata) "recurrent fibroid tumors." But the microscope, though adding much to our knowledge of malignant growths, has failed to shew what cancer is.

Sir Henry Butlin was a strong advocate of the parasitic theory—his book is a marvellous plea in favor of the protozoal origin of cancer. Though the "humoral" origin was in vogue in his early days, Butlin was a localist. In his time operations for relief of cancer became better planned, were performed earlier and better, and, thanks to Lister and Simpson, with much less distress and danger to the patient.

Dr. J. A. Shaw-Mackenzie, is studying malignant growths from the standpoint of the bio-chemist. One of the inhibitory bodies in normal tissue cells is cholesterin. Why, we don't know. It is neutralized by the fatty acids of the blood—a natural phenomenon. Apparently the balance of normal cell growth and development depends upon its operation. If some change intervenes to disturb or arrest the process, it is found that the blood fails to supply the enzymes needed for the disintegration of the cholesterin. This enzyme is deficient in the blood of cancer patients. Treatment on this basis has given some marked results. But what causes the blood change? Auto-intoxication from intestinal stasis, says Sir Arbuthnot Lane.

Dunn, discussing the economic aspects of cancer and the results following the discovery of its cause, recalls the history of small-pox, the horror of which appalled humanity with its universality and death rate of one in three. "Still, in the end," says he, "from among the many millions of the then popu-

lation of the world, one human brain was sufficient to release mankind from the devastating infliction." He pessimistically adds, "It is unlikely that history will repeat itself in the case of cancer."

Sir A. Lane contributes the third article in the symposium under the caption, "Is Cancer Preventable?" He calls attention to McCarrison's discovery that in the Himalayas, where he practised nine years among several isolated races remote from civilization, he never saw a case of asthenic dyspepsia, gastric or duodenal ulcer, appendicitis, mucous colitis or of cancer, though he did as high as 400 major operations a year. The diet of these people and habits of life are responsible for their freedom from these diseases. They live on crude grain, usually imperfectly cooked. This stimulates peristalsis and frees the bowel, preventing stasis. They eat little or no animal food and thus the circulation is freed from the toxic material resulting from its digestion. Lane says chronic intestinal stasis is the bane of civilization and that it produces cancer either directly by trauma or indirectly by the toxins circulating in the blood; therefore, if we wish to prevent cancer *we must conform our diet and habits to those of the cancer free races.* This is simple and sensible. If followed *the money spent uselessly on pathological, bacteriological and chemical investigation may be saved.*

Lane admits that cutaneous cancers are produced by heat or some definite mechanical or chemical irritants.

Bland Sutton then goes to the bat. A London physician told this reviewer that Sir John eschews lettuce, parsnips, tomatoes, celery and their *congeners* in the raw state—afraid of cancer. Sir John's subject is "The Micro-flora of Cancer." As might be guessed from Sir John's dietetic habits, he favors the parasitic origin of malignant disease and emphasises the proneness of cancer formation to undergo bacillary invasion. Cancer, he says, rarely manifests itself in a massive form as sarcoma usually does. Cancer is very common on an epithelial surface exposed to injury. The tongue is often attacked. Its surface is abraided and develops an ulcer. Septic implication of the lymph-nodes follows. Streptococci breed abundantly in the tissues, invade the blood stream, producing anemia and the cancerous cachexia. Patients with lingual cancer have septic gums. The teeth are loose and often diseased. The intractable sloughing in cancerous tongues is due to micro-organisms. The malignancy of a cancer is often an expression of its septicity. The study of the micro-flora helps us to understand the massiveness of some forms of secondary cancer. Primary cancer of the rectum swarm with colon baccilli. The secondaries in the liver are sterile. Rapidly growing cancers of the colon are sometimes accompanied by fever. This is due to the invasion of the cancerous mass by colon bacilli.

Dr. Lazarus Barlow is of opinion that radium and x-rays have a more selective action upon malignant cells than any that has hitherto been dis-

covered, and that it is theoretically possible to direct them against the malignant cells alone or predominantly. This time has not arrived, and pending its arrival both means of cure should be used. The relative parts played by the two partners in the association is not the same in all cases of cancer, not even in all stages of one and the same case. An early rodent ulcer should be radiated; an operable breast carcinoma excised with rays as adjunct; an operable one of the cervix radiated mainly with surgery as an adjunct. In inoperable cases radiation often ameliorates; occasionally it is injurious.

As improving in technique goes on improvement in result will follow. The using of rays is inducing subjects of cancer to apply for relief earlier.

Medical Health Officers' Association

Dr. F. J. Farley, of Trenton, President of the Ontario Medical Association, delivered one of the most forceful addresses one could wish to hear. He maintained that the necessity for Public Health Work was so obvious that public opinion should not tolerate any government in power that would not endorse and carry out a public health programme that would tend to insure the happiness, health and welfare of the people.

Other important recommendations Dr. Farley made were the establishment of county laboratories for the country physicians, the appointment of properly trained, whole time county medical health officers, and community nurses.

Dr. Roberts,, M.O.H., of Hamilton advocated a similar scheme for health districts of from 20 to 25 thousand people.

Dr. J. A. Morgan of Smith Township, Peterborough, gave an interesting paper on "How to control Diphtheria in a small country village," stressing the fact that diphtheria is one of the chief causes of children's deaths in a community, and that the free use of swabs and antitoxin, coupled with the services of the community nurse are the best methods for its control.

A most interesting address on "Food Poisoning" was given Dr. M. J. Rosenau, Professor of Medicine and Hygiene of Harvard University, author of the standard text-book "Preventive Medicine and Hygiene," and one of the most outstanding authorities on Public Health subjects on the continent.

Dr. H. W. Hill, of London, Ontario, gave an address on "Some modern fallacies," emphasizing the point that public health work is more concerned with the prevention of disease than its cure.

Dr. W. W. Lailey of Toronto, read a paper on "Pre-natal care."

Dr. C. J. O. Hastings, M.O.H., Toronto, gave an address on "More efficient care of mothers, and expectant mothers before, during and after confinement."

The morning session of the second day was entirely taken up with a discussion on milk and its prominence as a food indispensable both to the adult and the child.

According to E. H. Stonehouse, President of the National Dairy Council, who delivered the first address in the morning, on the subject of "How to Produce a Clean and Safe Milk Supply," some of the conditions throughout the province are very bad. "If I were dictator" Mr. Stonehouse declared, "I would pass a Dominion law to-morrow, if that were possible, for the compulsory pasteurization of milk in every city, town and village. When we reach the point after years of education, when we can get good, practically certified milk, then and then only can we dispense with pasteurization."

Dr. Roberts, Medical Officer of Health, of Hamilton, pleaded for the laboratory diagnosis of milk. "Twenty-five per cent. of all these cases of surgical tuberculosis are caused from the bovine tubercular organism that the human being obtains from milk," he said.

Mr. Alex. White, Chief Sanitary Inspector of the Province, advocated the appointment by the Government of three trained milk specialists who could approach the question from the dairyman's standpoint.

Several doctors and inspectors from various parts of the province, including Galt, Brantford, and Ottawa, maintained that the most important

question of all was the condition of the herds. One suggestion offered was that each municipality should have complete control of the milk supply.

"Municipal Control of Milk Supply" was the topic of an address by Dr. Grant Fleming, Deputy Medical Officer of Health, Toronto. The inspection of farms and the education of the farmers, having as inspectors veterinary graduates, and the inspection of all equipment used in producing and delivering the milk, and in the process of pasteurization were absolutely necessary, according to Dr. Fleming.

Topics of a more general nature formed the programme of the afternoon. Dr. Colin Campbell of Toronto, gave some alarming statistics in regard to the frequency of "Squint" or cross-eye, among children. If taken in time, before the age of five or six years, there should be no difficulty in total cure. The trouble arose when a cure was attempted by a person other than one possesssing general medical knowledge. In many cases, the doctor stated, children were apparently freed from the trouble, and the eye seemed perfectly normal, when as a matter of fact, the child would be almost entirely blind in the one eye.

"The pity is," he declared, "that all of it is preventable. "No time should be lost in stopping the practice of having children under five years of age examined for glasses, by anyone other than a qualified medical practitioner." Dr. Campbell suggested that the Health Officers' Association, as a

body, endorse a resolution to that effect. It is expected that the committee will consider the matter and report to the association at its next meeting.

A paper by Mr. F. A. Dallyn, C.E., on "Soil Pollution," in which the need of extreme care in the placing of a well was emphasized, and a description by Dr. P. O. Coulombe, M.O.H., of the work carried on by the Health Department in Sturgeon Falls, with which he is associated, concluded the conference.

Medical Reunions

One of the pleasantest features of the meeting of the Ontario Medical Association was the Class reunions. Many of them were held on Thursday evening, June 1st, at the King Edward Hotel, where the members dined together and talked of the old days.

The class of '92 holding its quinquennial reunion met at the Carls-Rite Hotel on that evening for dinner. Fifty men graduated; forty are still alive and practising. Dr. Thos. Middlebro, of Owen Sound, presided. Dr. F. K. Armstrong motored up from Florida to be present. The class attended the Garden Party of Dr. Herbert A. Bruce, who is a member of the class.

Ex-members of the House-staff of the General Hospital had lunch together on Thursday at the Academy of Medicine. Dr. A. M. Taylor, of Goderich, the oldest living ex-house surgeon, an interne

in 1870, was present. Next comes Dr. Barry Nevitt, of this city (who presided) and Dr. R. H. Robinson, also of Toronto. In Dr. Taylor's time there was one house surgeon a year; now there are 33! One hundred and twenty men took part. At this meeting was decided the fate of the Gold-Headed cane for the coming year. Mr. P. C. Larkin, High Commissioner, some sixteen years ago, had made in London, England, a replica of the famous Gold-Headed cane which was carried by the Physicians of the Royal Household from Queen Anne's time to George III's, and which is now in the museum of the Royal College of Physicians, London, to be carried by the ex-house doctor who made the best contribution to medical science each year. Dr. W. E. Gallie, is the present holder. It has been carried by Thos. Cullen, of Johns Hopkins and Dr. A. E. Caulfield, of Toronto.

The following Executive was appointed:—

President, Dr. Thos. Middlebro, Owen Sound; First Vice-President, Dr. J. N. E. Brown, Toronto; Secretary, Dr. A. E. Gray, Medical Superintendent of the Toronto General Hospital; Treasurer, Dr. W. S. Fawns, Toronto; other members of the Committee: Dr. W. B. Hendry, Dr. W. E. Tilley, Dr. Detweiler, Dr. Meek.

Angina Pectoris

The editor of *The Medical Press and Circular* calls favorable attention to Mr. Walter Verdon's new work on angina pectoris. Mr. Verdon, he

says, holds that the primary source of the pain in angina is flatulent distension, notably of the cardiac end of the stomach and the adjoining portion of the œsophagus. Sir Clifford Allbutt has referred to the former as "a sensitive vagus area," and "a like sensitiveness, I believe," says the reviewing editor, "is shared by the neighboring portion of the œsophagus."

"It is assumed that gaseous distension excites the gastro-œsophageal musculature to contract, and thus provoke a specific sensation; it is now known that the sole agency capable of exciting the specific sensibility of a hollow viscus is spasm of its muscular tissue.

"The radiograph has shown that the stomach in flatulent subjects, far from being dilated, is frequently contracted, showing that the presence of gas tends to promote spasm, and it is contended that during the angina seizure the gastro-œsophageal musculature is thrown into spasm.

"It is further assumed that, if the spinal segments which receive the gastro-œsophageal sensory nerves be hyper-irritable, pain and discomfort will be felt in that part of the body wall which receives sensory nerves from these segments in the thoracic wall and the upper limbs.

"Mr. Hurst has shown that distension of the œsophagus by means of the œsophagus balloon, induces a sense of fulness beneath the sternum, and this with increasing inflation is felt as a lump.

"In proof that anginous seizures are started from the stomach and œsophagus, Mr. Verdon adduces the fact that over and over again he has been told by patients, whom he has asked to take note of the initial symptoms, that the seizures began with discomfortable sensations and fulness and pressure in the upper mid-thirds of the chest, sensations which are frequently attributed by them to imprisoned gas which they have no power to release.

"It is well known that gastric flatulence is a fruitful source of tachycardia and cardiac irregularity, notably of the variety known as extra-systole. It has seemed to me that the imprisonment of flatus in the lower portion of the œsophagus is especially potent in this respect.

"The relation between flatulence and the anginous seizure is shown by the relief which follows from the disengagement of the imprisoned gas. Mr. Verdon cites several cases in proof of this. It is further shown by the instantaneous relief afforded by dilating the stomach with the œsophageal tube, a procedure he has many times undertaken.

"There is no evidence that the pain is due to exhaustion or cramp in the heart; it generally beats quite normally during the attack, and the pulse regularly.

"Nor is a persistent high pressure a necessary factor in angina pectoris, though it is often present. Many with high blood pressure do not have angina. Coronary disease is not essential: in

at least one-half the cases it is not present. In the aged, coronary disease is almost universal.

"Mr. Verdon admits that aortic disease, aneurysm, lesions of investments of the heart, pleuritic and periodical effusions and adhesions are remote subcauses of the anginous habit, but not exciting causes.

"Commonly, exercise immediately after a meal brings on the pain—because it raises the intragastric pressure (by contraction of the muscular walls of the abdominal cavity) and so to force the gas in the stomach through the cardiac orifice into the œsophagus, raising the intra-œsophageal pressure and exciting anginous pain. In persons of flatulent habits the cardiac orifice of the stomach is overt, allowing gastric and œsophageal atmospheres to merge.

"Diet in these cases should be non-flatulent in character. Regular exercise within proper limits is beneficial; but not at once after meals.

"Exposure to cold and wind should be avoided. A judicial use of aperients is called for. For insomnia ten grains of iodide of potassium is recommended, and nitroglycerine to induce relaxation of the gastro-œsophageal spasm; and hot applications to the stomach and thorax relieve the pain."

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

HODGKIN'S DISEASE, OR LYMPHOCRANULOMA

By Julian Loudon, B.A., M.B., M.R.C.S., F.A.C.P.

Chief Physician, St. Michael's Hospital, Toronto; Clinician in Medicine, University of Toronto.

The case I am reporting to-day is one of Hodgkin's disease, occurring in a woman of sixty-two years.

This name was given to the disease in consequence of a report, in 1832, by Dr. Hodgkin, of Guy's Hospital, of a series of cases of lymphatic enlargement, with deposits in the spleen. This series is now regarded as having been composed of several—more or less—closely allied diseases. These comprise leukaemia, leukosarcoma, lymphosarcoma, and Hodgkin's granuloma. The last named disease, with which this paper is concerned, is at present considered to be a non-tuberculous, chronic inflammation of the lymphatic tissues, and distinct from the others.

It is usually a disease of youth, like other abnormal lymphatic states, and the departure from this general rule makes the case especially interesting. Focal infection may apparently, be a predisposing cause. Various bacteria have been described as possible specific causes, and lately, the relationship to tuberculosis has again been much discussed. Bunting and Yates have recently called attention to a diphtheroid bacillus.

The microscopic structure of an affected lymph gland consists of a recticulum, with small and large lymphocytes, plasma cells, eosinophiles, endothelial cells and giant cells. The lymphocytes are numerous in the early stages, but are later destroyed, as the endothelial cells, eosinophiles, neutrophiles, and basophiles increase. According to Ewing, the eosino-

philes and allied leucocytes, probably arise as a result of small extravasations of blood, which mark the early lesions. The giant cells are generally known as the Sternberg-Reed bodies, and as they have special characteristics they may be of great service in diagnosis.

The blood picture is, usually, that of a secondary anemia, with an added relative, and total increase, in the white blood cells. In the early stages, the white count is normal, with a relative increase, in the small lymphocytes, which persists only for a short time. The total white blood cells then increase to two or three times their normal number, and this increase affects chiefly the polymorphonuclears, and large mononuclears. The basophiles and eosinophiles increase slightly, but later, almost disappear.

The symptoms have been grouped, by Trousseau, under three periods, viz:—(1) Latent period. (2) Progress and generalization period. (3) Cachectic period. The latent period consists of recurring attacks of lassitude and malaise, which may pass unnoticed, or be forgotten by the patient. The period of progress and generalization begins with swelling of the lymph nodes, anaemia and fever. This swelling usually begins in the cervical glands, but may rarely commence in any other group, such as axillary, inguinal, mediastinal, or abdominal. Generalized swelling of all the lymphoid tissue then takes place, and may affect such organs as the spleen, kidneys, liver, tonsils, stomach and intestines. It is characteristic to have lymphatic hyperplasia alternating with periods in which the growth is stationary or even diminishing. This peculiar fluctuation of objective symptoms, occurring in the later stages, recalls very strongly, the recurring subjective symptoms, of the early part of the disease. The third period is marked by malnutrition, anemia, fever, anorexia, headache, vomiting and pressure symptoms or signs, which vary according to the situation of the growths.

As previously stated, my case is one of a woman, 62 years of age. She was admitted to St. Michael's Hospital, on Nov. 18th, 1921, complaining of swelling of the neck, right arm, and right leg. A history of feeling languid and tired, about four months previous to admission, was given, and about a month later, she noticed that both sides of the neck were swol-

len. These symptoms disappeared, but were soon followed by marked swelling of the right arm, lasting three or four weeks. As this subsided, the legs began to enlarge, and in a few days, there was a recurrence, of the swelling in the neck.

On admission the skin was quite pale, with brownish pigmentation at the points of pressure. The right leg was oedematous, but the arms were normal in size. There was enlargement of the lymph nodes, on both sides of the neck, as well as in the axillary, epitrochlear, inguinal, right popliteal, and right preauricular regions. The heart was slightly enlarged. There was a soft systolic murmur in the mitral area, and accentuation of the second sound in the pulmonic area. Fluid could be demonstrated in the right pleural cavity, and also in the abdomen. The liver was about two inches below the costal margin, in the lateral vertical line.

The temperature was usually remittent, but at times intermittent, ranging from 97 to 103 degrees. Pulse rate was 80 to 108. Respirations 18 to 28. S.B.P., 128; D.B.P., 154. Analysis of urine was normal. Wasserman blood test was negative. Blood cultures were sterile.

Blood counts made on Dec. 21st, 1921, by Dr. Laughlin, showed R.B.C., 3,400,000. W.B.C., 8,000. Hb. 65%. C.I. .93. There was little or no change in the size or shape of the red cells, and the condition was considered to correspond to a secondary anemia. On Jan. 16th, 1922, a differential white count showed Polymorphs, 83%; Lymphos, 10%; large Mononuclears, 5%; Eosinophiles, 1%; Transitionals, 1%.

On Jan. 18th, 1922, the right epitrochlear gland was removed for examination. The pathological report was as follows:—"Sections from the gland show a marked divergence from the normal structure. The lymphocytes have, to a large extent, disappeared, being replaced by a diffuse growth of large cells with large, pale, vesicular nuclei, a considerable number of which show mitotic figures. Interspersed with these cells, is a much smaller number of large and small lymphocytes, a few plasma cells and eosinophiles. Multinucleated giant cells are to be seen, but are very few. There is a very distinct fibrosis, and in one area a hemorrhage of considerable size. In places there are small accumulations of hyaline-like material. Diagnosis:—A somewhat atypical Hodgkin's granuloma."

The patient became gradually weaker and died on February 3rd, 1922.

SUMMARY: AUTOPSY REPORT.

(*a*) Anatomical Diagnosis:—

1. Hodgkin's Disease.
2. Ascites.
3. Nephrosis.
4. Purulent Bronchitis.
5. Bronchopneumonia.
6. Arteriosclerosis.
6. Follicular Cysts of Left Ovary.
7. Chronic Endocervicitis.

(*b*) Gross Findings:—

1. Large amount of clear fluid in peritoneal cavity.
2. Spleen much enlarged, with adhesions to diaphragm. Light-red, in color, with some paler areas. Firm in texture.
3. Liver, enlarged, with finely nodular surface.
4. Uniform enlargement of mesenteric lymph glands, which form a large tumor mass. On gross section, glands are firm and white, with numerous hemorrhagic areas.
5. Kidneys about normal in size, and with smooth surface. Very pale in color.
6. Purulent material in larger bronchi, of both lungs. Lower lobes, congested. A few bronchopneumonic patches in left lung.
7. Bronchial glands, enlarged and firm, and deeply pigmented.
8. A few calcified, atheromatous patches, in abdominal aorta.
9. Slight atheroma of coronary arteries.
10. Left ovary, cystic.
11. Slight mucoid discharge from cervix, uteri.
12. Enlargement of cervical axilliary, and inguinal lymph glands.

(*c*) Microscopic Findings:—

1. Sections from mesenteric lymph glands show the structure previously described in the report on the epitrochlear gland.

2. Suprarenal glands show congestion. Capillaries of the medulla are engorged with blood. Connective tissue is increased.
3. Liver shows rather advanced fatty degeneration of cells.
4. Spleen shows very little lymphatic tissue. The picture is much the same as in the lymphatic glands. The pulp spaces are filled with mononuclear cells and a few eosinophiles. Considerable blood is present in various spaces.
5. Lungs show a few small areas of broncho-pneumonia, and considerable anthracosis.
6. Kidneys show considerable swelling and degeneration in lining cells of the proximal tubules.

Before closing I would like to add the opinions of a few authorities in regard to lymphatic diseases.

In a recent number of The Johns Hopkins Hospital Reports, Dr. L. T. Webster, describes 123 cases of lymphosarcoma, lymphatic, leukaemia, leukosarcoma, and Hodgkin's disease. All these conditions except Hodgkin's disease are considered to be different manifestations of the same disease. Hodgkin's disease is a reticulo-endothelial proliferation in contrast to a lymphocytic proliferation, and is probably a distinct entity.

Prof. V. C. Jacobson, writing in the Albany Medical Annals, of December, 1921, concludes that the effect of chronic irritation in the form of toxins or bacteria upon so capricious a tissue as that of lymph nodes may, with reason, be expected to be shown in many ways, and the response of the various indigenous cells, at different ages of the individual, to certain factors, many primarily infectious, may present the picture of pseudoleukaemia, lymphocytic leukaemia, Hodgkin's disease, or lymphosarcoma, the leukaemias developing chiefly in the adult, the others in the young.

Dr. W. S. Lemon, and Dr. J. B. Doyle, writing in the *American Journal* of the Medical Science for October, 1921, make the following concise statements:—"The histologic picture shows that the disease is caused by an infective agent, the exact nature of which remains unknown. Levin, in discussing the similarity of the disease to cancer, states that the

infective agent enters from the surface and attacks the gland because it is the first protective barrier. After the invasion and consequent proliferation in the first glands the subsequent development is analogous to cancer, inasmuch as proliferation continues until the death of the patient and the highly specialized function of the original parenchymal cells is lost. He believes that this return to the character of the foetal cell is an evidence of malignancy and places Hodgkin's disease in a borderline position between inflammatory and malignant growths. We believe that the clinical course of the disease, the selection of only one type of tissue in which proliferation occurs, and the almost universal absence of infiltration through the boundaries of the gland indicate an infectious basis. We may add that metastasis is a proliferation only of pre-existing lymphoid tissue and does not appear in organs devoid of that tissue."

I have said nothing regarding treatment, but hope to consider the recent therapeutic advancements at a subsequent meeting.

THE NURSE OF THE FUTURE

By Dr. H. C. Wrinch.

It seems to the writer that the nurse and the whole nursing situation is a subject very greatly misunderstood at the present day.

And this applies not merely, or even principally, to the so called outsiders, as we might fairly term the general public, but is applicable in a large degree also to the inner circle of interests most closely allied to the nurses, that is to say the hospitals, the patients, the executive of nurses' organizations, and even in many case to the nurses themselves.

This statement is apparently self-contradictory. Its explanation and justification lie in the fact that while the relation of the nurse to her obligation or, as it might better be put, to her opportunity, is one that may be viewed from many angles, the tendency of the individuals of the associated interests is to consider the nurse solely or largely from their own particular point of view, without taking into consideration the concern of others equally interested in her and her work.

The hospital undertakes to take care of the sick and to carry out the instructions of the medical adviser in giving the treatments laid down by him. In doing this it has undertaken obligations which it can only fulfill by the help of nurses. The hospital, therefore, of necessity engages the required number of nurses to do its nursing, just as it engages so many house physicians, dressers, dispensers, cooks, orderlies, engineers, laundry operators, book-keepers, stenographers, and the almost innumerable assistants in one department or another, that make up the staff of the institution.

But since, from varying causes, the nursing force is being continually depleted, and the young womanhood of our country are just as continuously seeking entrance into this most praiseworthy and noble field of usefulness, and since their required training is only to be obtained in the hospitals, it sometimes appears almost as if the hospitals have taken advantage of the situation in which these aspiring young women have found themselves. Impelled by the ever present difficulty of making ends meet financially, and looking about for a solution of the financial problem, the hospital has found that young women, for the sake of obtaining experience and training in nursing, were willing to accept a ridiculously small return for service worth very much more to the hospital. The hospitals driven by dire financial stress have accepted such insufficiently paid service. They have found that by opening a training school and by engaging, in association with it, a certain number of trained nurses to direct the work of the pupils, their nursing could be carried out at less expense than with all trained nurses. Also they have lengthened the period of training from two to three years, which in the mind of many is longer than necessary to give an average pupil nurse a good training in the practical side of nursing. And for this full period of training the hospital is receiving the advantage in nursing service.

As against this it may be argued that the hospital pays good salaries to a certain number of instructresses, provides class rooms and equipment for teaching. This is true as far as it goes, but it is open to question if this outlay is ever sufficient to bring the account of expenditure for nursing service up to the cost where only trained nurses are engaged. So much

for the hospitals' point of view which in many cases resolves itself into a question of how to get the nursing done with a minimum outlay both of money and trouble.

The nurse, on the other hand, realizing that "in the hospital" is the place and atmosphere for her to acquire the much to be desired skill and knowledge, submits to the regulations made to govern her conduct in the institution. To her credit it should be said that generally she performs her work in as faithful a manner as she can, but in all too many instances the thought uppermost in her mind is: "How and when shall I get my diploma?" rather than "How is my patient progressing?" and "What more can be done to add to her comfort and facilitate her recovery?" In other words, to the nurse-in-training, the hospital is the mill, which if she puts into it so many hours per week of more or less willing, although underpaid, service, will at the end of three years grind out to her a diploma. The receiving of the diploma ushers in the day when the candidate becomes a fuly fledged professional nurse, and she may chose henceforth to nurse only such cases as appeal to her taste and are able to pay for her services the full charge fixed by her Association.

A third point of view is that assumed by the official organizations of trained nurses as legally constituted. Such organization seem to have accepted as one of their principal functions the professionalizing of the high and God-given calling of caring for the sick. Under the assumed necessity of maintaining or raising the standard of nursing service, higher preliminary educational standing is being demanded, and more, and yet more, subjects are being added to the curricula of boards of examiners, until many desirable candidates are thereby deterred from entering upon training, while of those who follow the course and graduate, many by means of the standardizing, professionalizing process through which they have passed, have been trained away from and have lost the most valuable portion of a true nurse's armamentarium—the spirit of sympathetic, earnest desire to bring relief to the suffering.

There would be less ground or occasion for criticism of the present day nursing situation were it not that under existing conditions entirely too few nurses are being trained. Somewhere the system is at fault, and because of this the people at large are suffering.

It is true that at times nurses are out of employment while at the same time there are people, in homes of moderate circumstances, requiring the services of nurses but doing without them because of inability to meet the fixed charges for nursing service. This also must be laid at the door of the system.

It is at this point that the "system" must relax, or it will precipitate its own downfall.

The highly trained nurse of to-day, with her good preliminary educational standing, believes that she is entitled to the standard fee for her well trained ability, for is she not capable of making all preparations for a major operation, and can she not carry out safely many forms of specialized treatments? With this view the writer is not taking issue. But there are many requiring nurses who cannot pay for such highly specialized experts. They would be satisfied and their requirements would be met by the services of one less highly trained, and one who had entered upon that training without as advanced preliminary education. Our great and outstanding error of to-day is in recognizing only one standard in nursing. We are demanding that all graduates of our nursing school shall, upon graduation, and without further study, be capable of taking positions as heads of departments in large hospitals, of being dietitians, instructresses, night-supervisors, matrons of small hospitals, and assistant matrons of large ones. To properly fill any of these positions a young woman ought to have a fair preliminary education and certainly she should also have a good training in theory as well as practice of nursing. The fault to be found with the present system of training, in view of fitting the nurse to fill executive positions such as those referred to, is that it gives too little opportunity for study of theory. It would be a better course if the practical work were confined to the first two or two and a half years, and then follow with six months devoted entirely to study. The student would then be able to bring her full power to bear upon the theoretical work, instead of, as at present, having to use the fag end of a busy day in endeavoring to master technical studies that are by no means easy when one's brain is at its clearest.

Some such modification of our present course of nursing would give us much better material for our executive positions

than the present three years of mixed practice and theory. The nursing authorities themselves declare that in two years the pupil ought to be sufficiently trained in the practical work. They claimed that the third year, when it was added, was to be essentially a year of study. It would be much better if they made it such, or at least a good portion of it.

But why compel every nurse to become fitted for executive positions when perhaps only one in five will ever want to take such a position? If, as has been admitted by nurse executives, two years is sufficient to give the practical part of the training, why not allow any nurse who so desires, to stop at that point? She could then at once enter upon her duties as a private nurse in the home, or as special in hospital, if so desired. This class of candidate would naturally be recruited from young women without the more advanced preliminary education. She would enter upon the course of training with less trepidation, having no desire to take the heavier technical studies which are such a bug-bear to many of our student nurses to-day. Not having the incubus of heavy examinations to look forward to she might be expected to give more attention to practical work. Such a pupil would in the very large majority of cases turn out a most excellent nurse for private work.

A course such as this would attract a large number of young women who now are deterred by the fear of heavy examinations, and do not offer themselves to the hospitals, but enter other spheres of usefulness as clerks, stenographers, or what not. It is these very young women that we need to make up our deficiency of candidates for training, and to supply nursing service for those homes unable to obtain such help on account of prohibitive charges.

This second class of nurses would naturally give their services for less than present rates, because their training has taken less time and because, from their preliminary education, they would not have expected to reach such highly remunerative positions as the more theoretically trained nurses of to-day.

To put into practice this system of having two classes of trained nurses would not necessitate any serious change in the hospital work. It would mean that all nurses would take the same training up to the time of completion of the practical

training, which might fairly be put at two years, or two years and three months. They would receive a certain amount of theoretical teaching during that time—perhaps an amount equal to what is given the first year nurses at present. They would of course be examined upon what they had been taught. They would then receive diplomas. Those desiring to do so would then be recognized as trained nurses, and enter upon the practice of their profession.

Those who desired to qualify for executive positions might enter forthwith upon their studies leading to examination for that pupose, or they also might engage in practice for a time and take the course in theory whenever they chose. This would give opportunity for earning money to meet cost of living while studying later, and would be doubtless followed by a good proportion of students.

The course in theory for the higher standing might very conveniently be given in connection with a university; but details such as this are merely a matter of adjustment.

After passing the examination in these later studies, the candidate would receive a diploma certifying to the nurse's standing. Such diplomas would be recognized by hospitals desiring nurses to fill the executive positions upon their staff.

Earlier in this paper the statement was made that the system must relax or it would accomplish its own downfall. This is no idle threat or vainglorious attempt at prophecy. The "writing on the wall" is to be read in the action of one of the eastern cities. In view of the large amount of sickness among the less wealthy classes, for which no nursing was available the municipal authorities have brought into effect a system of partial training of women who offered themselves for it, giving them a few months only of instruction in connection with the municipal homes of varying character. After this very incomplete training these workers are sent out to cases of sickness. A number, some seven or eight, are placed under the direction of a throughly trained nurse who visits the homes where those workers are placed, giving them instruction or assisting them, as the necessities of the case demand. In this way the effectiveness of the trained nurse is multiplied by the number of her assistants.

It may be said, in criticism, that this is less thorough than having a trained nurse in each home. Granting this, the situation of the people receiving this assistance is infinitely better than before. They are being cared for.

There is to-day a spirit of intolerance that will not tamely submit to conditions of irksomeness if such are capable of amelioration. The laity are not slow to institute a remedy if those more directly responsible do not rise to the occasion. The action of the municipality above referred to bears out this contention. We, in responsible relation to the hospitals and nursing situation in Western Canada, will do well to work out these problems for ourselves and our people, or they will surely be worked out for us by those whose dictates we shall not be able to dispute.

Ours is the responsibility to see to it that hospital and nursing facilities are provided for our people. The position will surely be humiliating if we fail in it.

In working out this readjustment it is inevitable that the question of remuneration of nurses will also come up for consideration. It is to be hoped that when it comes up we shall welcome the opportunity to wipe off the stain that is upon our name as hospital executives for fair dealing, and that the "allowance" made to nurses-in-training will be, if not in full value for their services, at least in much better recognition of their worth to us. Anything less than $250.00 per year for a nurse-in-training ought not to be entertained by any hospital, or permitted by legislative authority. In the steps being taken to place the onus of support of hospitals upon the shoulders of the people as a whole, this matter of revising remuneration of our nurses-in-training for the future should be given due consideration.

The writer is prepared to believe that the views expressed in this paper may not meet with the unqualified approval of every member of your Convention, until such times as they may be given full consideration, but they are submitted in the profound conviction that some radical readjustment is imperative, and that when it comes it must be somewhat along the lines suggested.

THE HOUSE SURGEONS OF THE TORONTO GENERAL HOSPITAL, 1890, 1891

By Thos. S. Cullen, M.B., Baltimore, Md.

For the first time since the hospital was opened as far as I could learn the internes were selected from the Trinity and Toronto Schools according to their standing in the final examination.

From Trinity—Robert M. Hillary.
Eugene McCarty.
Roland Hill.

From Toronto—L. F. Barker.
Charles F. McGillvray.
Thomas S. Cullen.

Fred Fenton and Wm. McGillvray substituted for part of the year.

Fenton settled in Toronto and developed a large obstetrical practice. He died several years ago from appendicitis.

Wm. McGillvray located in the Western States. He died several years ago. (Charlie McGillvray will give you the details).

Bob Hillary lives in Aurora and has an excellent practice.

Eugene McCarty had a large practice in Suspension Bridge, New York. He developed cancer of the tongue and died ten or fifteen years ago. Dr. Ernest Wilson, of Niagara Falls, Ont., or Dr. James McGary of the same town can probably give you the date of his death.

Roland Hill is one of St. Louis' best known surgeons. He went directly from the Toronto General Hospital to his present home. In 1919 he had the signal honor of being elected President of the Western Surgical Association, one of the most important surgical societies in the United States.

Charlie McGillvray enjoys an extensive practice in Whitby, Ontario.

Lew Barker spent several years at the Johns Hopkins Hospital working with Osler, Welch and later with Mall, and then went to the University of Chicago as Professor of

Anatomy. When Sir William Osler left to become Regius Professor at Oxford, Barker became Professor of Medicine in the Johns Hopkins Medical School and Physician-in-Chief of the Johns Hopkins Hospital.

The House Staff of 1890 are more than proud that one of our number has become one of the most prominent, if not the leading medical consultant in the United States.

His publications are too well known to need comment here.

On one occasion we had a very obscure case in the ward. No one had an inkling of the condition. The patient died a few days later. Death took place about two in the morning, and the body was to be taken away at 5 a.m. I secured permission to make an autopsy, and shortly after two on a very cold morning, started the investigation. The stillness was intense and I was absolutely alone.

The autopsy room faced on the back street. Suddenly I saw a face peeping in at an upper window along the street and I was nearly scared stiff. On second glance I found that it was Dr. Bennett, one of our recent graduates. Nobody was ever more welcome than he, as the preceding twenty minutes had been the most lonely in my life. The patient had died of an unrecognized perinephritic abscess.

—*Thomas S. Cullen.*

About 1902 the amphitheatre in the Toronto General was full of students. It was clinic day and Dr. McPhredan was quizzing them. He asked one student after another "What is the cause of a red nose?" Man after man shook his head until my brother Ernest was reached—he promptly replied "Whisky," Whereupon Dr. McPhedran shook his finger violently at him and said with great emphasis: "*I want you to understand, young man, that indigestion is the chief cause of a red nose.*"

Having a red nose myself I could thoroughly appreciate just how Dr. McPhedran felt.

—*Thomas S. Cullen.*

On one occasion Dr. Fred Grasett was doing a lateral lithotomy on the then Treasurer of the Grand Trunk Railroad, a delightful man for whom we all had the highest regard.

One large flat stone was removed, then a second, then a third—Charlie O'Reilly who was helping, piped up: "My Gad, he has a regular marble quarry." In all eight stones were removed, and their combined weight was 11¾ ounces.

This gentleman was alive and well a short time ago—thirty years after.

—Thomas S. Cullen.

Now and again a patient would take chloroform badly, and sometimes would stop breathing. On such occasions if it were during the winter Dr. O'Reilly would rush out and look for a large icicle. This would be inserted into the rectum and in some instances it was remarkable to see how quickly the patient responded to the stimulus.

—Thomas S. Cullen.

The Dispensary—Each interne spent two months in the dispensary, or pharmacy. It was his duty to fill all prescriptions for the hospital and out-patient department, and also to prepare all the solutions.

He was entrusted with the purchase of all drugs for the hospital. Well do I remember that during the grip epidemic of 1890 that Howard's quinine reached $3.80 per ounce—Charlie O'Reilly continually reminded me of that fact.

We also took the rough sponges, washed them thoroughly, put them through a sulphurous acid solution then rinsed them again, and finally put them in "gem" jars full of carbolic solution. So good did the finished product appear that on one occasion the daughter of a trustee who was being shown the dispensary thought they were preserved peaches.

—Thomas S. Cullen.

What advances in medicine in the last thirty years! During my four months on the medical wards I had 144 cases of typhoid fever to look after.

Thanks to the splendid work of the Health Department of Toronto, and to the excellent work done by the Health Departments of the large and small cities and provinces this disease bids fair to be eventually virtually stamped out.

—Thomas S. Cullen.

That quiet, thoughtful and polished surgeon, R. B. Nevitt was somewhat of a wag. On one occasion he and I were ascending the back stairs next the pharmacy. He stopped short, looked around and said "Cullen, if these walls could only speak." As remember he was once an interne in the Toronto General himself.

—*Thomas S. Cullen.*

Charlie O'Reilly tried to maintain a gruff exterior but he was one of the warmest-hearted of men. He would rarely directly reprimand a man for dereliction of duty. For instance if I did wrong and he knew it he would say nothing to me, but would give Barker, or one of the other men the devil, expecting them to tell me. He knew that they would have no feeling in the matter as they were in no way to blame, and further that they fully realized that in turn would be called to task for their shortcomings.

One example suffices. When our term began Dr. O'Reilly called each one of us in turn and gave us a lecture as to what our duties were and picked out some particular rule that we must obey. For instance he told me that I must be at breakfast by eight-thirty each morning without fail. During my student days I had a newspaper route, rose at three-thirty every morning except Sunday, went to the "Mail office," secured my papers and journeyed to the east end. The Toronto General was in my bailiwick and I delivered my papers there usually before daylight and kept up this procedure until a few weeks before I went on the house staff. How easy for a man who was accustomed to rising at three-thirty each morning to be on hand for breakfast by eight-thirty.

By-the-way, the only familiar face seen at the hospital early in the morning was George Shaw. Every house surgeon well remembers that little man with the heavy eye-glasses who was at the front door. The Toronto General Hospital never had a more faithful employee—ever polite, always doing everything he could for any seeking advice and comforting those in distress about their loved ones. No one of the old General Hospital family is more kindly remembered by the former internes than Shaw. It was a great pleasure a few years ago to learn that a pension fund was being raised for that old and valued employee of the hospital.

One one occasion Dr. O'Reilly came right out from the shoulder. We house men were sitting in our small dining-room having supper at ten p.m., and by the way, those were the best night luncheons I have ever seen in any hospital, delicious cold roast beef, catsup, bread and butter and some preserves. Charlie, as we all affectionately called him, stuck his head into the dining-room door and said: "Who lives in the sitting room?" (Barker and I were the occupants.) "Come right out here. Four gas jets burning, My Gad! the gas bill was $600 last quarter." After being duly admonished we sauntered back to the dining-room and the Superintendent started down toward his quarters. In a moment or two he was back. "Who lives down in H?" "Come right out here." (Roland Hill and Fred Fenton lived there). On reaching their room he drew attention to two gas jets going full blast, and said in a sorrowful tone: "My Gad, the gas bill was $1,200 last quarter."

—*Thomas S. Cullen.*

Book Reviews

Aids to Organotherapy, by Ivo Geikie Cobb, M.D., M.R.C.S., Neurologist, Ministry of Pensions; Late Assistant to Out-Patient Physician, The Middlesex Hospital; etc. London: Bailliere, Tindall & Cox, 7 Henrietta Street, Covent Garden. 1922. Price 5s. net.

This book enables the reader to grasp the basis of organotherapy. The physiological facts relevant to the various secretions are dealt with; and likewise the secretions which stand most firmly on physiological and clinical evidence. The thyroid receives the most stress. The author points out the special signs and symptoms which demand a particular extract.

He acknowledges that until our knowledge of the bodily processes is more complete and we know more of the factors which produce and maintain health, many therapeutic procedures will remain speculative.

Keen's Surgery, Volume VIII. By Surgical Experts. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and Clinical Surgery, Jefferson Medical College, Philadelphia. With 657 illustrations, 12 of them in colors. Philadelphia and London: The W. B. Saunders Co., Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1921. Price Volume VII and VIII and Desk Index Volume, net per set $27.50. Sold by subscription.

The eighth volume of Keen's Surgery is a supplementary volume, intended to add to the previous volumes the recent advances made in various departments of surgery.

Especially noteworthy are the sections on amputations, surgery of the thorax and surgery of facial defects. The experience gained in war work has been incorporated in these chapters.

The balance of the work is devoted to bringing up to date the surgery of the head, abdominal conditions, and the newer developments in general and special surgery.

A complete index of all volumes is supplied as a separate booklet easily handled and convenient for desk purposes.

Essays on Surgical Subjects, by Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, England. Illustrated. Philadelphia and London: W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. Price $5.50 net. 1921.

This volume dedicated to the Mayo Brothers is an interesting reproduction of certain articles published at various times by Sir Berkeley Moynihan, who is one of the best known British Surgeons. The volume contains the "Murphy Memorial Oration" which was delivered in Montreal before the American College of Surgeons, in October, 1920. This oration contains a splendid tribute to the life and work of the late Dr. J. B. Murphy, of Chicago.

The book also contains certain articles on surgical subjects, dealing in turn with the ritual of the surgical operation and the surgical treatment of such conditions as gastric ulcer, intestinal stasis, acute abdominal emergencies and the

surgery of the chest. It also contains a reproduction of the address on Surgery delivered before the British Medical Association in Surgery, in 1913, and an address delivered before the Nursing Staff of the Leeds General Infirmary, in 1921.

It is not necessary to analyse the book in detail for the purpose of this review. The work of Sir Berkeley Moynihan is well known to Surgeons the world over, and his views on the various subjects dealt with in this volume are of the utmost value, not only to the surgeon but also to the physician.

A Manual of Surgery for Students and Physicians, by Francis T. Stewart, M.D., formerly Professor of Clinical Surgery, Jefferson Medical College; Surgeon to the Pennsylvania Hospital. Fifth Edition, with 590 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price $10.00 net.

This textbook is now published in its fifth edition. This fact is sufficient evidence that it has been found of value as a guide, both for students and for surgeons.

Those of us who knew Dr. Stewart, the author, lament his death. He was an excellent teacher in the Jefferson Medical College, and Surgeon to the Pennsylvania Hospital. The manuscript of the fifth edition of this work was practically completed by Dr. Stewart at the time of his death. The manuscript was completed and prepared for publication by Dr. Walter Estell Lee. In the death of Dr. Stewart the profession on this continent have suffered a great loss, and we are fortunate in having this recent edition of his work placed in our hands, brought thoroughly up to date and the views therein stamped with his approval.

This volume, containing 1,024 pages with numerous illustrations, will be found a most valuable guide to the student preparing for his examinations and in addition both physicians and surgeons will find in it, in remarkably concise form, a fund of information and instruction which will prove a valuable service in the practice of surgery.

As the result of the Great War military surgery has received intensive study. For the purpose of this work Dr. Lee was engaged in a special survey of this field from 1915 on. The results of his military experiences have been incorporated in the present edition.

The entire work is most comprehensive and we commend it as a valuable addition to our textbooks on surgery.

A Text Book of Physiology for Medical Students and Physicians, by William H. Howell, Ph.D., M.D., Sc.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Eighth edition, thoroughly revised. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1922. Price $7.25 net.

Dr. Howell has presented his facts and theories simply and lucidly, and has judiciously limited the material selected. The reduction in the multitudinous material available has been by eliminating rather than by condensing. The author makes us realize that physiology is a rapidly growing subject, continually widening and re-adjusting its theories. He confesses that many of our conclusions are not final truth, but provisional only. Some knowledge of the evolution of our present beliefs is useful in showing the enduring value of experimental work.

Dr. Howell opens with a discussion of muscle-contraction, going into the chemistry of muscle, the theories of contraction and the effects of exercise and strain. Then comes the phenomenon of conduction and the properties of nerve fibre, and a chapter on electrical phenomena as shown by nerve and muscle, the nature of the nerve impulse being described and the nutritive relations of nerve fibre and nerve cell being discussed. Section II deals with the physiology of the central nervous system—the cell, the cord, the cerebrum, cerebellum, pons, medulla. A chapter is devoted to reflex action and to sleep. The chapter on the sympathetic might well be read with profit by every practitioner whose knowledge of it has become hazy. The special senses are treated in section III; the blood and lymph in section IV; while section V deals with the physi-

ology of the organs of circulation of the blood and lymph. A dissertation on respiration follows. The effects of pressure are described; the chemical and physical changes in the air and blood discussed; the innervation of the respiratory movements dilated upon, and the results of work, altitudes, air pressure upon respiration noted.

In the section on digestion and secretion first come chapters on movements of the alimentary canal and the composition of food. Then follow the usual chapters on the action of the saliva, gastric juice, bile, pancreatic juice, secretin enterokinase, trypsin upon the various elements of ingested food; with the corresponding physiology of the various enzyme-producing organs.

The reader interested in metabolism will derive much benefit from the section on nutrition, heat production and regulation; and upon the history of protein foods, carbohydrates, fats, the inorganic salts and the accessory articles of diet. Finally come the chapters on reproduction and heredity with an appendix on proteins, diffusion and osmosis.

The book is well written and will well repay perusal, whether by medical student or practitioner.

Diseases of the Skin and the Eruptive Fevers by Jay Frank Schamberg, M.D., Professor of Dermatology and Syphilis, Graduate School of Medicine, University of Pennsylvania. Fourth edition, thoroughly revised. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz, Co., Limited, Toronto. Price $5.50 net. 1921.

"This book, as in the former editions, no doubt will be well received by the medical profession. The part devoted to the eruptive fevers is excellent and is a most valuable addition to any work on diseases of the skin. The illustrations throughout are clear and distinct and well represent the various diseases."

The Mechanics of the Digestive Tract by Walter C. Alvarez, M.D., Assistant Professor of Research Medicine, George Williams Hooper Foundation for Medical Research, University of California Medical School. With 22 illustrations. New York: Paul B. Hoeber, 69 East 59th Street. 1922. Price $3.50 net.

The rhythmical gradient in the heart from the sino-auricular node to the ventricle suggested to Alvarez some years ago that a similar mechanism might obtain in the gastro intestinal tract. He has spent several years studying the peristalsis of the tract and has come to the conclusion that such a rhythmical gradient does exist and in this small volume he describes his conclusions and their application to clinical work.

He describes a pacemaker in the lesser curvature of the stomach and believes that this is the highest point in the gradient and that the contents of the stomach and bowel are moved onwards in the tract from the highest gradient to the lowest which is just above the the rectal sphincter. The various factors found to affect this gradient are considered. It is also shown how abnormal conditions reverse the gradient and the importance of the reverse gradient in its clinical occurrences is dilated upon.

Alvarez theory has much to commend it. At least it carries a large germ of truth and the author emphasizes the fact that much of his theory is suggestive rather than proved. No internist surgeon or general practitioner will regret a careful perusal of this small work for it is more than probable that much of Alvarez' ideas will stand the test of trial.

The Allen Treatment of Diabetes by Lewis Webb Hill, M.D., and Rena S. Eckman, with an introduction by Richard C. Cabot. Fourth edition. Boston: W. M. Leonard, publisher. 1921.

"The Allen Treatment of Diabetes" is a compact, interesting volume, giving detailed instruction for the feeding of diabetic cases. The Diet Tables are numerous and much diversified, and afford ample scope for selection. The book is well adapted to get the intelligent co-operation of the patient.

Practical Infant Feeding by Lewis Webb Hill, M.D., Junior Assistant Physician to the Children's Hospital, Boston; Assistant in Pediatrics, Harvard Medical School. Illustrated. Philadelphia and London: The W. B. Saunders Company. Toronto: The J. F. Hartz Co., Limited, Canadian Agents. Price, cloth, $5.50 net.

This book is written in an attempt to show the application of scientific principles to practice. It is absolutely necessary for anyone who is feeding babies to have a considerable knowledge of the chemistry of metabolism in normal and abnormal babies. Unless this is obtained, a satisfactory working knowledge of infant feeding is impossible. It is this elementary understanding of what is going on in the digestive tract, of what the different food substances do under various conditions, that so many practitioners lack. The author has gone into a good deal of detail concerning those scientific investigations which are of practical importance. A book of this nature is, therefore, especially valuable to that ever increasing number of interested practitioners who are coming for instruction to our post-graduate classes in pediatrics.

The American Medical Press.—A new publication, under the name of *The American Medical Press,* recently made its bow to the medical profession of this continent. We would like to take this opportunity of congratulating Dr. McMechan and his associates upon this publication. As stated in the announcement received from the publishers, "*The American Medical Press* is an Open Forum and a Digest of Current Events and Editorial Opinion to enable the Allied Professions to see the Problems and Responsibilities of their Citizenship and act accordingly."

We believe that this publication will fill a decided want and that through its pages the rank and file of the profession will have a voice in reshaping their own future. The articles appearing in the initial number are of the greatest interest and we bespeak for the publishers the support of Canadian medical practitioners.

The address of the new journal is 280 Broadway, New York.

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CONTENTS

EDITORIAL

	Page
Looking Backward	77
Therapy Through Conscious Auto-Suggestion	79
Medical Education	81
Transfusion Precautions	82

SOCIETY PROCEEDINGS

The Canadian Medical Association	85
American Medical Editors' Association	101

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A Journal published monthly in the interest of Medicine and Surgery

VOL. 52 TORONTO, SEPTEMBER, 1922 No. 3

Editorial

Looking Backward

Women in medicine and women in the ministry; —both of these subjects have come up again for discussion in the forum of male assemblies during the present year.

It has been generally supposed that the first-named question was determined long ago, and that the past quarter century has recognized women's place in medicine as fully justified by the service she has rendered. The recent belated action of the great London Hospital in barring the admission of female students has naturally created something of the same stir that proposal of disenfranchisement or reversal of her property rights would arouse. It is a harking back to a position no longer tenable.

The feasibility of mixed classes in medical studies is one to be decided according to locale and in-

ternal conditions of each individual school. If a medical corporation prefers separate sex teaching, and can afford to duplicate medical instruction so that each class will have equal opportunity, possibly no objection will be raised by women students. But this is quite a different matter from total exclusion by any medical institution. All that women ask as students is entrèe to the best in medical opportunity.

Again, the ministry, as a whole, has thus far succeeded in keeping the field in possession of men: albeit women here and there have entered the pulpit as special preachers on missions or some other form of good works. An occasional one has even dared a pastorate. But now, in such male strongholds as Presbyterianism, they are asking for regular ordination and license to preach.

The General Assembly of Canada, meeting in June last, handled the favorable report of their committee with a typical canniness that shelved the question and saved the situation for the time. But it is only for the time, since with women already in medicine and law—what possible objection is sufficient to shut her from the ministry?

Having once admitted women to equal educational privileges with men, the open door to all vocations in which they can use this education naturally follows. Time only will show what is best in this respect; and to time may be safely left the sifting and reorganizing of all social and economic sex relations such as are herein involved.

Therapy Through Conscious Auto-Suggestion

C. F. Harford, in a contribution in *The Medical Press and Circular*, says that, while Psycho-therapy is generally regarded as applicable to physical disorders, M. Coué claims that conscious auto-suggestion may be used beneficially in every conceivable malady if the patient is mentally fit. Harford maintains every living process of the body develops gradually through the training of the psyche, or imagination (as Coué calls it). In the past we have regarded healing—whether of bone, lung or tissue traumatized by fever—as brought about through action of nervous or circulating symptoms under general brain control, but without due acknowledgement of the connection of the mind with the phenomena of life. The essayist considers this probably due to too largely restricting our ideas of mind to consciousness—a fatal mistake. We must be prepared to accept the teaching of the unconscious mind, if we hope to realize the bearing of any form of psycho-therapy upon other forms of medical practice.

Harford continues, stating that fear is the most potent agent in causing derangement of bodily functions. Since the effects of passion or panic upon the circulation are well known, the lesson is obvious: that cure should be sought largely through methods which may affect the emotions.

Quoting the Medical correspondent of *The Times* the author adds: "The advent of M. Coué has set

thousands of hearts aflame. That fact is perhaps of greater significance than any other; for it shows that men's minds were prepared for this visitor; unconsciously they have been turning away from the materialism of the last two decades. Healthy and sick crave for something more than a mechanical conception of vital processes."

Here follows the Coué formula:

1. Every morning and every evening, betwixt sleeping and waking, practise concentration upon the formula of general suggestion (Day by day, in all respects, I get better and better).

2. When during the waking hours you are unexpectedly assailed by some mental or physical trouble, have recourse to the particular suggestion: "It is passing off." Should the trouble persist, repeat this in the evening before going to sleep.

3. As opportunity offers, attain the state of attention, either through simple collectedness or through auto-hypnotization. Then call up as vividly as possible the image of the desired bodily and mental ameliorations.

4. Cultivate the faculty of relaxation and the practice of collectedness (art, imagination, habit of collectedness). Cultivate also the faculty of sustained attention (bodily and mental exercises, regular exercises in learning by heart.

As a paraphrase on the above:—

Let us represent to ourselves, let us picture ourselves as we would like to be—vigorous, robust, over-

flowing with health to a greater sharpness of outline in this idea, which, the more salient it is, the more it assumes the form of an image, the better the prospects of its results.

"Day by Day (in all Respects) I get Better and Better."

Then pass to details, dwelling mentally for a brief space upon each of the improvements specially desirable for the moment. The general formula remains the same from day to day. The details vary with passing needs.

Medical Education

In view of the recent discussion in these columns anent certain phases of Medical Education in Toronto University the report of the reference Committee of the American Medical Association on Medical Education proves interesting reading.

The Committee's report (which was adopted) holds that all existing medical schools of a high grade should be encouraged to enlarge their facilities so as to care for a larger number of medical students by increasing buildings, equipment, and adding to their teachers, in order that instruction can be furnished to students in small groups and the present high standard maintained. The smaller schools in large centers should be given financial aid and their standards raised. Those schools with a large population

territory which are now giving two pre-clinical year courses should be enabled to establish four year courses. New schools should be established in a few states large enough to warrant them.

"The plan of some of the great foundations to require full-time clinical professorships is not wise and does not receive the support of the general profession. The wisdom of making such a plan a condition of endowment is doubted."

"The tendency to premature or over-rapid specialization is deplored. Medical schools should revise their curriculums as to provide a thorough training for general practice, leaving course in the specialities for the graduate medical schools."

To partly correct the faulty distribution of physicians, as betwen urban and rural districts, hospitals should be established in all communities having sufficient territory to support them; these institutions to be under the direct control of the medical profession. The improvement of highways would aid in providing physicians for many districts.

Transfusion Precautions

Dr. I. H. Erb, pathologist to the Victoria Hospital, Toronto, in his interesting demonstrations at the meeting of the Ontario Medical Association, stated that it was unfortunate that the terms "Universal Donor" and "Universal Recipient" had found their way into the literature of blood transfusion.

The terms were very misleading, and tend to give a false sense of security. One might conclude from the name that if the donor is in the universal donor group he could give his blood to the patient without any danger. This was not true.

The only absolutely safe rule was to be sure that the donor was in the same group as the patient requiring the transfusion.

In discovering a suitable donor one should first secure a few centimeters of blood from the donor and a few from the recipient. Centrifuge separately both specimens, getting the serum separate from the clot. Then put a drop of the patient's serum on a slide. Prick the donor's finger, secure a small drop of his blood and mix with the patient's serum. If they mix without agglutination, one-half of the test is all right. Then take a small drop of the donor's serum and mix with a drop of the patient's blood; and if no agglutination occurs we are certain both patient and donor are in the same group. But we do not know what group. If there is any agglutination in either case, another donor will have to be tried.

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Toronto ——— Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Society Proceedings

THE CANADIAN MEDICAL ASSOCIATION

The Winnipeg meeting of this Association was opened in a speech of welcome by Lieutenant-Governor Sir Jas. Aikins. In part, he said:

"There is always torment where one is fearful about his knowledge of the work he is called upon to perform and about his competency to perform it. A sense of one's ignorance and conscience makes an uncomfortable operator. Your desire in meeting together is to be given a lead that you may ascertain all that is up to date known in your branch of science, and when you have ascertained it you are happy. If I were to say you were empirics, you might give me an unpleasant time, for that term used about your profession is sometimes considered a synonym for charlatans or quacks. A person using it in that sense of your established Canadian profession is an ignoramus and condemns himself, yet, as Max Muller says, I think in his 'Science of Language': 'An empirical acquaintance with facts rises to scientific knowledge of facts as soon as the mind discovers beneath the multiplicity of single productions the unity of an organic system,' and Lecky, in his 'History of European Morals,' says: 'Our almost absolute ignorance of the causes of some of the most fatal diseases and the empirical nature of nearly all our best medical treatment has often been recognized.'

"But, gentlemen, by conferring together, as you are now doing, and getting the benefit of the experience and observation of others skilled in experiments, you improve yourselves and your profession. Sir Astley Cooper meant only that when he bluntly expressed his idea of his own profession as a profession founded on conjecture and improved by murder. He was a safe operator not always successful, but in such cases how much better to die painless, as Socrates did by drinking hemlock, than to writhe in pain as in years agone, after a

barbarous operation and cautery. So your profession of anæthetists grew from a prior knowledge and experiment to become the beneficial science it now is. There is something still to learn. You are going on to perfection.

The Canadian Medical association is proposing to investigate the feasibility of the formation of a Canadian College of Surgeons. A committee has been appointed to consider this matter and it is expected a report will be submitted at the next annual meeting.

It was also decided to prepare a memorial for Lord Lister, to take the form of an oration every three years, to be delivered at the convention and to be known as the Lister Orations.

R. D. Carman, M.D., of the Mayo clinic, Rochester, read a paper on "The Limitation of Roentgenologic Diagnosis," in which he stated diagnoses to-day are much better than those of a few years ago, due to the fact that subjective symptoms had been supplemented by objective facts. The combined efforts of the chemist, the microscopist and the roentgenologist had made for rapid gains in the efficiency of medical diagnosis.

Roentgenology, he said, should be practised by physicians only as a thorough knowledge of anatomy, physiology and pathology with a broad general experience in the practice of medicine was esential to the reliable interpretation of X-ray signs. Whatever it may be some day, X-ray diagnosis is not yet automatic; laboratory findings must still be correlated with clinical findings if the best interests of the patients are to be served.

The doctor pointed out the extraordinary value that the X-ray had achieved in the diagnosis of disease of the stomach, kidneys, lungs and bones and emphasized the wide variation in the normal, with which the roentgenologist must be familiar if this value is to be sustained.

In concluding he made a plea for the teaching of roentgenology in medical schools on a scale equal to that of other laboratory methods.

"Safety First in Anæsthesia," was the title of a paper read by F. H. McMechan, M.D., Avon Lake, Ohio, secretary-general of the Associated Anæsthetists of Canada and the United States. The study concerned a safety first campaign inaugurated by the National Anæsthetic Research society. Dr. McMechan said: "In our investigations we have found the

average death rate under all anæsthesia within 72 hours after operation is 1 in 250. In order to obviate these preventable deaths more than 200,000 safety first charts have been issued to hospitals and anæsthetists in Canada and the United States. These charts demand that the surgical and anæsthetic risk of every patient be determined in advance and furthermore every patient operated on be given the safeguard of five-minute blood pressure readings during the entire operation so the surgeon can be assured the patient is always in a zone of safety. These blood pressure readings have been so accurately determined that it is now possible to anticipate the occurrence of shock during operation by them half an hour before any other symptoms would indicate the onset of the condition.

This campaign has also elaborated a breath-holding test based on the developments of the aviation service during the war by means of which the patient's capacity for operation may be evaluated. In the air service only those aviators who could hold the breath over 45 seconds were deemed competent for altitude flights. During the induction of ether anæsthesia under 50 per cent. vapor tension the patient on the table is virtually carried to an altitude of five miles and unless given the proper amount of oxygen with the anæsthetic suffers the same collapse as the aviator without oxygen equipment. Patients who can hold the breath 45 seconds are considered good risks for operation, but those who can hold it only 20 seconds or less are grave risks.

Already in those hospitals and clinics in which the safety first compaign has been tried the death rate has shown a marked decrease and the comfort of the patients and the rapidity of recovery has been greatly enhanced. One of the anæsthetic agents which least affect the heart reserve and at the same time meets every demand for oxygen is nitrous oxide-oxygen and the use of this has so bettered post-operative recovery that one-third more patients can be handled by the hospitals.

"Surgical Aspects of the Gall Bladder Problem," was discussed by Dr. Roscoe R. Graham, Toronto, and "Some Observations on the Treatment of Pelvic Inflammation with Radiant Heat" was a paper read by Dr. D. S. McKay, of Winnipeg, showing the inadequate results of operative treatment,

with points in favor of the treatment by radiant heat. Dr. James McKenty, of Winnipeg, spoke on "End Results in Duodenojejunostomy," and the last item under this section was a report on "Traumatic and Industrial Hernia," by Dr. J. A. Hutchinson.

Dr. E. L. Pope was chairman of the medical section which held its meeting in the ball room. Dr. L. F. Barker, of Johns Hopkins, delivered the first address, after which a discussion on treatment of experimental diabetes and diabetes mellitus with pancreatic extracts was given by Drs. Banting and Best, of Toronto. A lantern demonstration by Dr. S. J. S. Pierce, of Brandon, on "Some Clinical Studies in Blood Cholesterol," showed the various methods of determining this with a view to finding the one best adapted to clinical use. "Studies in Gall Blader Pathology" was the subject of a lantern demonstration by Dr. W. Boyd, Winnipeg, in which was embodied some study in comparative anatomy with new views on the function of the gall bladder.

Radiologists and anæsthetists attended the session of the general convention, but the following extra programme was provided for their benefit as well: "Paper on a Number of Follow Up Cases," Dr. A. H. Pirie, of Montreal; "Artificial Emphysema and Cavity Dilatation with Gas in Diagnosis," Dr. B. H. Orndoff, Chicago; "Three Cases of Pancreatic Affections," Dr. W. M. Carr, Winnipeg, and "A Review of Spinal Anæsthesia," by Dr. W. G. Hepburn, of Montreal; Nitrous Oxide-Oxygen in Nose and Throat Surgery," by Dr. E. I. McKesson, of Toledo, Ohio; "The Welfare of the Surgical Patient," by Dr. Slater, of Winnipeg: "On the Teaching of Anæsthesia to Medical Students," by Drs. W. B. Howell, W. G. Hepburn and Wesley Bourne, of Montreal; "The Post Operation Incidence of Acetone & Co. Content in the Blood," by Dr. K. G. Grant, of Winnipeg.

Upon the conclusion of the business, the members of the association attended a luncheon at the Royal Alexandra hotel, at which Dr. E. Leslie Pidgeon spoke on the subject, "Social Responsibilities." Stressing the value of society to the individual, Dr. Pidgeon said no one could live independent of environment. It was bound to affect the individual. Hence a duty was placed upon every one to make his actions

contribute to the betterment of society. Each man should do his own work in such a manner as best to develop his character. In this way he would be a benefit to the community and would have fulfilled his social responsibilities.

In the surgical section business was carried out according to schedule. The first speaker to address the meeting was Dr. J. M. T. Finney, of Baltimore, on "The End Results in Operations Gastric, and for Duodenal Ulcer." He said widespread dissatisfaction had been evidenced with the results of the present methods of treatment of gastric and duodenal ulcer on account of the following causes: Improper selection of cases for operation; improper methods of operation; failure to follow up cases after operation. Among those methods suggested for improvement along these and other lines were closer co-operation with medical men, better selection of cases, improved operative methods and a better follow-up system of post operative treatment.

Dr. Fulton Risdon, of Toronto, spoke with a lantern demonstration on "Plastic Surgery of the Head and Neck." In this were included severe burns of the eyelid resulting in ectropion and entropion, the latter where the eye has been lost and part of the conjunctiva; contractions about the lips and cheeks where fibrous tissue had been formed and very dense bands on the neck holding the chin on the chest. The surgical attitude toward hair-lip and cleft palate was also reviewed.

Dr. M. I. Saeng, of Montreal, spoke on "The Prostatic Problem Simplified," telling of the attempts to find a method of performing prostatectomy that would be safe and easy and give satisfactory end results in the hands of men not specially trained for this work.

"Some Observations on Surgery of Duodenal Membranes," with a call-in report of results of treatment, was presented, with lantern slides, by Dr. R. F. Cromarty, of Brandon. The report consisted of a short discussion of the anatomical relations of the duodenal membranes, with the most specific symptoms they appear to produce, the methods of treatment used and the results obtained.

Dr. E. J. Boardman, of Winnipeg, gave a brief talk on "When to Operate in Renal Calculus," and the morning

session for this section closed with an address by Dr. B. J. Brandson, of Winnipeg, on "Perforated Duodenal Ulcer." Report was submitted of eight cases of perforated gastric ulcer and three cases of perforated duodenal ulcer operated on by the speaker at the Winnipeg General hospital. Ten recovered and one died. All the patients were men from 19 to 60 years of age, and specific details of the individual operations were given.

Dr. J. L. Carter, Brandon, was elected president of the Canadian Radiological Society; Dr. C. W. Proud, Vancouver, first vice-president; Dr. J. C. MacMillan, Winnipeg, second; Dr. L. T. Pariseau, Montreal, third, and Dr. L. K. Poyntz, Victoria, secretary-treasurer. Important visitors in attendance were Dr. L. G. Cole, New York; Dr. R. D. Carman, Rochester; Dr. R. H. Stevens, Detroit; Dr. Orondoff, Chicago; Dr. C. G. Sutherland, Rochester, and Dr. F. S. Bissell, Minneapolis.

The outstanding feature of the programme was a report by Dr. R. H. Stevens and Dr. Richards, of Toronto, on "Deep X-ray Therapy and Cancer," dealing with the newer methods of treatment by extremely high tension currents for the purpose of generating X-rays of depenetration for use in the case of particularly malignant cancer.

The medical section opened with two papers, "Physical Conditions in General Medicine," by Dr. A. McPhedran, Toronto, and "Application of the New Psychology by the Internist and General Practitioner," by Dr. Charles Hunter, of Winnipeg. These were discussed together, by Dr. L. F. Barker, Baltimore, and Dr. J. Baragar, Brandon.

Dr. A. McPhedran, professor emeritus of Toronto University, made a plea for greater recognition by the general practitioner of the importance of psychic phases of ordinary diseases. Dr. Hunter covered briefly the more recent applications of psychological thought as elaborated by Freud, Janet and McDougall to the treatment of nervous diseases.

Dr. Barker urged that more study be given by practitioners and more instruction to students in this subject.

The next paper was a report of a case of hysterical paraphegia by Dr. K. McKenzie, Halifax. A number of cases were quoted at Seele-Hayne hospital in England. His own

case was one of a young woman with hysterical paralysis, who had been unable to walk for 17 years; under suitable psychotherapy she was walking well and attending to domestic duties. The paper was briefly discussed by Dr. W. F. Dey, of Winnipeg, and Dr. Baragar, of Brandon.

The next item was "Auricular Fibrillation." A summary of the symptoms and visible findings was presented and treatment outlined by Dr. Burridge, who stressed the value and safety of properly standarized preparations of digitalis. In his hands digipuratum has been most reliable. The paper was discussed by Dr. Charles Hunter, of Winnipeg, and Dr. R. W. Powell, of Ottawa.

"Epidemic Encephalitis," by Dr. Colin Russell, of Montreal, was next. Unfortunately Dr. Russell was unable to attend and his paper was read by Dr. W. Boyd, Winnipeg. He reported encouraging results in a small series of cases by use of intraspinous injections of horse serum. He did not attempt to generalize, but results in the series were encouraging. The paper was in the nature of a preliminary report.

An appeal to physicians and surgeons, already among the most public spirited of men, to take a still deeper interest in the health and efficiency of the state, was voiced by W. Sanford Evans in an address to the convention at luncheon in the Royal Alexandra hotel.

Mr. Evans, in opening, congratulated the convention on the evident importance of the work it had accomplished already, and expressed confidence the delegates would realize the sincere welcome extended to them by the citizens of Winnipeg.

"The doctor's work brings him in touch with one of the chief mysteries of life," Mr. Evans declared. "The Union of mind and soul with matter. The body is the instrument through which the mind and soul operate, and in the keeping of this instrument fit the doctor is faced with the problem of cause and effect between mind and matter. In the long history of medicine it has been clearly established that the body must be treated with physical agents as remedy; but there also has persisted the belief that mental and emotional states have also powerful effects.

"Essentially the same problem is met in the body politic,"

Mr. Evans concluded, and he appealed to doctors for a deeper interest in the health of this great body. All the elements of mind, will and emotion were just as important in the vigor of a nation as in the health of citizens, he said. Only when there had been a clear national purpose and an integrity in national life had man risen to greatness.

The annual meeting of the Canadian Medical Protective Association was held at 12.30, the president, Dr. R. W. Powell, in the chair. After a brief presidential address, reports of work during the past year were read. These stressed the fact the organization was now of age, for it was inaugurated in 1901, at the Canadian Medical Association convention held in Winnipeg.

Great interest was evinced by those in attendance at the convention in the exhibit, arranged in the ballroom, of mechanical devices, showing the development of electro-therapeutics. It is considered by those who are authorities on such matters the exhibit is one of the best ever thrown open to the public. One instrument of particular value to the medical profession is planned for the generation of ultra-violet rays for use in treatment of tuberculosis. Several splendid collections of plates show abnormalities, and an excellent X-ray of a sacred ibis of Egypt, in mummy form, more than 4,000 years old.

The two aims of the practitioner should be to alleviate suffering and to advance the science of medicine, was the thesis of the presidential address delivered by E. W. Montgomery. Advancement of the science was necessary for the alleviation of suffering, and might be obtained if practitioners would keep accurate and readable records of their cases. They should in fact write medical histories which would be more than a mere record of facts, for there would be included accounts of reconstruction from given symptoms with the history of past cases as a guide to procedure. If the practitioner is not able to make the diagnosis or effect the cure himself he should call in the chemist, the bi-chemist, the bacteriologist, the radiologist, or any or all of the 'ologists'. Pride of achievement will give more satisfaction to the specialist in many cases than cure will to the patient, said Dr. Montgomery. Some people had advanced the opinion that medicine is not an exact science. It really was, but sociological factors and the complexity of the

human anatomy made it very complicated. If each doctor would be honest with himself and would apply to each case a habit of study instead of a preformed opinion there would be no charges of charlatanism.

Doctors must be able to determine relative values. In one of the western provinces there were a great many doctors who had purchased X-ray machines because they considered them to be a good advertisement, and because they were considered by the buyers to be a sure and easy method of diagnosing cases. Dr. Montgomery pointed out that there was no royal road to learning and that unless the operator of an X-ray apparatus understood the functions and structure of the human body it was not a sure and easy way to determine what was the matter with the patient. The path to learning was, on the contrary, narrow and rocky, but those who trod it found evidences of others having been there ahead, such men as Jenner and Harvey. Before the economic circumstances of the province had become so poor it had been proposed to found 10 municipal hospitals outside of Winnipeg and if this had been done Manitoba would have been well equipped to look after all the diagnosing necessary in the rural districts, where at present 20 per cent. of the patients cannot be diagnosed without specialized equipment.

Comparing the modern doctor with the Hindu who worships his tools before an undertaking, Dr. Montgomery hoped the medical profession would not allow themselves to degenerate to the extent of fostering a cult of tool worship, for much could be done with very simple instruments such as the microscope, the stethoscope and a small laboratory.

L. F. Barker, M.D., of Baltimore, delivered a paper on the relation of heredity and environment to predisposition to disease. To those interested in this subject susceptibility to disease was of as much interest as the disease itself. Differences in exposure and in germs were not the sole causes of difference in the degree of illness. Differences in the constitutions of those infected had to be considered. From detailed study of heredity as seen in animals it would appear they are fundamentally the same as humans. An understanding of the form and function of adults comes only from comprehension of how much an adult evolved and the part of this evolution known

as heredity has been much better understood since the study of unit organisms was begun. Personal variation, morphological, functional, involuted and evoluted, were very important factors to consider in connection with the course a disease might be expected to take in an individual. No two persons are exactly alike and the student of the pathology of the constitution seeks the effects on individuals.

"It is not claimed that cancer can be cured by radiation therapy," stated G. E. Richards, M.D., of Toronto, in an address on X-ray Therapy and Cancer, delivered by special request to the convention.

"X-ray therapy was of very great value," he continued, but a certain type of publicity was misleading the public on the matter. At present doctors specializing on this subject will not even undertake to stipulate which types of cancer could be cured. Certain results covering a period of from four to seven years are on record and these may be considered encouraging. Some types of the growth respond to treatment more readily than others, but the claim is not advanced that cancer can be cured.

"Radium-therapy has reached its highest development in America," said Dr. Richards, "but France, England and particularly Germany hold the lead in X-ray therapy. In certain cases of cancer, operation is recommended; in others radium treatment, and in still others X-ray therapy. In some cases it is necessary to combine two or more of these processes. Several developments of recent times have revolutionized the science of radiation therapy. The first of these is the invention of the electroscope, by which it is possible to measure with exactitude both the quality and quantity of radiation. A second is the use of rays of high penetration, while a third was the ability to measure the exact distribution of the rays in the body under treatment, indicating in this way the amount absorbed.

"All cancer cells are not killed by the same dose," said Dr. Richards, "and the risk is very great if the field is large. Normal skin reaction should not be termed 'X-ray burn.' Such a condition of the skin is necessary to the proper carrying out of the treatment."

"Classification and Pathology of Tuberculous Diseases of

the Lung," was the topic of a lantern demonstration and talk given by J. Miller, M.D., of Kingston, who said the present nomenclature and classification of pulmonary tuberculosis were unsatisfactory, and terms such as "Phthisis" undesirable. Scientific classification should be based either upon avenue of infection or type of lesion. The former although the most satisfactory, was not always or even frequently ascertainable, but in the case of blood spread disease (military tuberculosis) was a means of differentiating a well-defined type. As regards the type of lesion, two might be distinguished, namely, consolidation of the lung substance (tuberculous pneumonia) and interstitial change or fibrosis. Both were commonly present but one or other usually predominated, the former in the acute and the latter in the chronic forms of the disease. Either of these types might be complicated by cavitation. There were illustrations of these types by means of photographs and autochrome lantern slides. Some of the complications of the disease were also illustrated.

A second lantern demonstration was given by David A. Stewart, M.D., of Ninette, on "Tuberculosis of the Intestines." He stated that tuberculous ulceration of the intestines was not a rare complication of pulmonary tuberculosis, but present in a large percentage of advanced cases. Perhaps it was present early — even earlier than the pulmonary lesion. At present it was diagnosed clinically and by barium meal and enema, only when advanced, and chiefly in large bowel. Earlier diagnosis, especially in small bowel, was needed. Treatment by Alpine lamp was of value and surgical treatment suitable in some cases, but of limited applicability. A report of 214 suspect cases in Manitoba Sanatorium was given and slides showing characteristic lesions.

The annual dinner of the Canadian Medical Association held at the Royal Alexandra Hotel Thursday night was a joyous affair which dispensed with much of speech-making but enjoyed the consumption of ceaseless wit and humor. To direct the mirthful course of so easily-running a gathering proved almost a superfluous pleasure for Dr. E. W. Montgomery, of Winnipeg, the Association's president.

If artful need had been wanted to start the ball of fun rolling, a pushful fillip which kept the merriment rippling all

evening was given in the proposal of the toast to "The Guests," by Dr. E. C. Fortin, of Winnipeg. As the learned doctors lay limply irresistant to the sallies wittily lanced into them by the skilful play of words of Dr. Fortin, they called for medical aid other than their own to save them from the convulsions into which their unsuppressed laughter was throwing them.

The scintillations of Dr. Fortin could be heard echoing around the rotunda of the hotel long after the doctors had oft repeated how good was the concert to which they had been entertained. The concert followed the performance of the duty imposed upon Dr. F. N. G. Starr, of Toronto, and Dr. J. M. Finnie, of Baltimore, Maryland, of replying to the witticisms in which the obvious good healths of the visitors to the convention had been proposed.

Control of irregular medical practice by effective legislation, so that the better forms might thrive, and the inferior, harmful types be allowed to wither out, was strongly advocated by Dr. Lewellys F. Barker, professor of clinical medicine at Johns Hopkins University, Baltimore.

There are more varieties of the inferior forms existing to-day than ever before, Dr. Barker claimed. Magic and mysticism were still relied upon in the remote places, and even in cultured circles. Quacks and charlatans, who claimed a knowledge not possessed by the ordinary practitioner, still abounded, and in these the speaker included "subtle advertisers or cures," patent medicine manufacturers, practisers of electrotherapy, osteopaths, eclectrics, chiropaths, will power trainers, religious healers, Christian Scientists, "who were attempting to cure diseases the existence of which they deny," and other such.

Irregular practices would not exist if they were not wanted and did not pay, Dr. Barker maintained, but there were always people ready to buy the "well advertised psychological gold bricks," feeling that ordinary orthodox methods could not fill their wants. This attitude depended in part on the shortcomings of the regular profession in dealing with mental phases, failing sometimes to bring conviction where the bolder, less scrupulous practitioners asserted their powers of suggestion; in placing disproportionate emphasis sometimes on

drug therapy (the rise of homeopathy was due to this); in failing to go as far as it should in giving immediate relief from pain; in the over-enthusiasm for surgery on the part of many of the profession. Many patients dreaded the knife and were consoled by those who promised cures without resort to surgery. Some wants, however, were unworthy or unsatisfiable, but the patients did not always realize this, and were often ignorant of the limitations of science, or dared not face the realities.

In the unorthodox, irregular practices there was some good, which would later on become regular and accepted. There were irregular practices in the ordinary profession, such as experimental treatments, which would in time become valuable. The ordinary practitioner must eject the obsolete and accept new methods and measures as science advanced.

Harmful practices interfered with a true knowledge of health and disease and favored loose thinking in general. Education of the public was necessary as well as the intervention of the government in making irregular practices of the harmful sort unprofitable, unattractive, disputable and penalizable. Only from a study of nature by observation and experiment could any real knowledge of disease come.

Dr. J. M. T. Finney, professor of surgery at the Johns Hopkins university, who was the other speaker, delivered a humorous and enlightening paper on "The Vicissitudes of a Doctor's Life." The medical profession, he declared, was a vast protective force for the preservation and restoration of health. He pointed out that doctors were not out for self-aggrandizement, but were called to the service of their fellowmen, and there was a lot of self-denial, sacrifice and hardship. The worry and responsibility of the physician in dealing with human life made the mortality rate among medical men much higher than that of any other profession, he said, but a short life crowded with service for humanity was better than a long life of luxurious idleness.

In this scientific age, Dr. Finney continued, the idea was to look upon the disease as a problem and the patient as a "thing." He emphasized the necessity for regarding the patient as an individual, and urged the intimate personal re-

lationship such as is seen between the family doctor and his patients. It would be a sorry day for humanity when the family practitioner, adviser and friend became extinct.

Doctor's duties are a mixture of the humorous and the pathetic, and the physician should be possessed of a sense of humour and should cultivate equanimity beyond all else.

The doctor saw human nature stripped of all its veneer and was an excellent judge of character. He was generally a poor business man, however, and might be imposed upon. The speaker mentioned the type of selfish, exacting patient, who was ever prone to be forgetful and unappreciative, and then turned to the grateful patient, who was of utmost value to the profession.

The medical men asked to be unhampered by foolish and reactionary cults, asked for public support, for increased endowments for hospitals and medical colleges, and desired to be consulted in matters of legislative measures for public health. Behind the laws of health there must be an educated and intelligent public, Dr. Finney asserted.

His Grace Archbishop Matheson, who was chairman, paid a warm tribute to the medical profession and declared that Winnipeg had many doctors of whom any city might well be proud. The meeting was decidedly well attended.

Members of the Canadian Medical Association had the privilege of listening to L. G. Cole, M.D., eminent X-ray specialist from New York who opened the general afternoon session of the convention Wednesday at Royal Alexandra Hotel with an address on "Roentgen Indications for Surgical Procedures in Gastric Ulcer." Dr. Cole had a large and highly technical collection of lantern slides with which he demonstrated his talk. J. M. T. Finney, M.D., of Johns Hopkins, Baltimore, was the second speaker of the afternoon, on "Spasmodic Torticollis" which intricate subject he treated comprehensively. A lantern and microscope demonstration by J. L. Todd, M.D., followed, on "Typhus Fever and Rickettsia." This consisted of a brief resumé of the works and results of the expedition sent by the League of Red Cross societies to Poland in 1920, for the purpose of studying the etiology of typhus fever.

Radiologists in attendance at the convention had their ranks augmented yesterday by the arrival of two leading lights

in their profession, L. G. Cole, M.D., of New York, and B. H. Orndoff, M.D., of Chicago. "Multiple Exostoses" by Dr. W. H. McGuffin, of Calgary, and "Diverticula of the Alimentary Canal," by Dr. A. E. Walkey, of Hamilton, Ontario, were the first items on the radiologists' programme and then came a plea on the part of Dr. L. F. Carter, of Brandon, Man., for more accurate nomenclature in connection with a paper read on the subject, "Intestinal Bands and Intestinal Adhesions—the Differential Diagnosis."

The Canadian Society of Anæsthetists held anæsthetic clinics at the Winnipeg General Hospital, where there were demonstrations of advanced methods of anæsthesia by Dr. E. I. McKesson, of Toledo, Ohio, President of the National Anæsthesia Research Society. While nitrous oxide-oxygen has won its position as the safest and most comfortable agent to be put to sleep with, it was not considered to give the muscular relaxation demanded by abdominal operators.

It devolved upon Dr. McKesson to originate and develop the technique of primary and secondary saturation, by means of which the inert gases of the tissues are replaced by nitrous oxide alone, and following instantaneous reoxygenation a sufficient period of relaxation is secured to allow the surgeon to perform even the most intricate abdominal and pelvic operations. This method was demonstrated on an unusually difficult gall-bladder case, as well as several appendix cases and a suspension of the uterus.

As a prelude to the opening paper of the afternoon session Dr. McKesson also demonstrated the superior value of nitrous oxide-oxygen anæsthesia for tonsil operations.

Dr. A. J. Slater, Winnipeg, outlined the problem surrounding the handling of very serious risk patients, especially those suffering from toxic, septic, anemic and cardio-renal or obstructive jaundice conditions. He referred especially to the value of the new method of evaluating the patient's internal respiration in relation to the risk and result of operation, and emphasized the life-saving importance of using calcium therapy and blood transfusion, especially in the presence of cholæmia. The protective character of nitrous oxide-oxygen anæsthesia against shock, in comparison with ether in bad risk patients, was also noted by Dr. Slater.

In the opinion of Dr. Wesley Bourne, of Montreal, the future of the specialty, as well as the advance of surgery and the safeguarding of public welfare, depend in large measure on the proper teaching of anæsthesia to medical students, and he detailed the didactic and clinical courses in vogue at McGill University which have been responsible for providing the Province of Quebec with unusually satisfactory and safe anæsthesia. Students at McGill University are shown how newer developments of laboratory research dovetail into the clinical demands of the newer physiological era of surgery and anæsthesia.

One of the distressing complications following anæsthesia may be the incidence of acteronuria resulting in delayed anæsthesia poisoning, and Dr. K. G. Grant, of Winnipeg, made a preliminary report on his researches in this matter and the remedial measures he has found effective.

During the final executive programme the following officers were elected for the ensuing year:

David H. Arnott, M.D., London, Ont., President; Walter L. Muir, Halifax, N.S., Vice-President; F. H. McMechan, A.M., M.D., Avon Lake, O., Executive Officer for the United States; H. Edmund G. Boyle, O.B.E., M.R.C.S., L.R.C.P., London, Eng., Executive Officer for Great Britain; Wesley Bourne, M.D., Montreal, Secretary-Treasurer.

Executive Committee: J. E. Blezard, M.D., Edmonton, Alta.; W. G. Hepburn, M.D., Montreal; Harry J. Shields, M.B., Toronto; Don. A. Warren, B.A., M.B., Hamilton.

During the evening all those in attendance at the meeting of the Canadian Society of Anæsthetists were the guests of Dr. and Mrs. F. H. McMechan, of Avon Lake, Ohio, at a delightful dinner party at the Royal Alexandra Hotel.

Dr. W. H. B. Aikins, in an interview on radium said to the *Free Press*:

"It is difficult to state, in a very concrete form, the value of radium in the treatment of disease. Radio-active materials as aids to the physician have been known for some time, but those whose use has found most widespread acceptance have been roentgen rays and radium. The latter are becoming more and more firmly stabilized as reliable agents in the curing of disease, each having its own sphere of usefulness.

"Radium is associated in the mind of the public, almost universally, with cancer," said Dr. Aikins, "much more so than are the X-rays, for they are generally considered from the standpoint of photography rather than therapy, and in the treatment of cancer with radium there will always be enthusiasts who consider this element as a cure-all. Most extravagant claims were credited to radium when it was first used for cancer and very high hopes were raised. Unfortunately, these hopes have, in many instances, not been realized, and the inevitable result has followed, namely, condemnation of the efficacy of radium in the treatment of cancer. In spite of these views many men have been working steadily on this subject and have secured most encouraging results.

"In the treatment of early cancer of the skin, radium deserves primary place. Its use is simple and unaccompanied by shock. It involves very little pain as compared with some of the old caustics. Results with radium are, as a rule, satisfactory, accomplishing complete removal of the growth and leaving little or no scar.

"Radiumtherapy has now passed far beyond the experimental stage. I have been watching its growth for fifteen years with ever-increasing conviction as to its value," said Dr. Aikins. "There is still a wide divergence of opinion as to the efficacy of radium as compared with surgery. Such opinions are very often influenced by personal prejudices, by one's breadth of experience, and by the type of disease which has been encountered."

AMERICAN MEDICAL EDITORS' ASSOCIATION

In view of the serious loss the American Medical Editors Association has sustained in the death of its Secretary-Treasurer, Dr. Jos. MacDonald, Jr., and the changes thereby made necessary in the arrangements and plans of the Association, the Executive Committee and Officers have decided to hold the 1922 meeting at Cleveland, Ohio, just preceding the Annual Convention of the American Public Health Association, to be held in October, 1922.

An interesting programme is being arranged and an announcement in due course will be issued giving further and more detailed information.

The President of the Association is Dr. Frank C. Lewis, with Dr. McMechan, as Secretary-Treasurer.

Selected Articles

*COMMON FOOT TROUBLES AS INDUCED BY SHOES

By Ralph B. Bettman, M.D., F.A.C.S., Chicago, Ill.

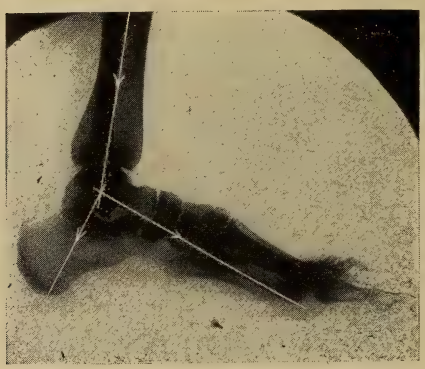
Civilization frequently forces the human body to adapt itself to usages detrimental to the functioning of its organs and members. Especially is this true in the case of the foot. From early childhood there is a continuous abuse of the foot. Sometimes it is the abnormal function that produces the noxious results, in other cases the shoes. The city dweller treads continually on hard, unyielding surfaces. Whether this be street, sidewalk, or floors, the ground walked upon takes up none of the jar. While naturally constructed to diminish shocks under conditions of modern life the foot is put to great additional work. The detrimental effect of hard pavements is generally recognized, and no good horseman will allow his horse to gallop or trot on cement or asphalt. We have learned to soften the footfall by wearing rubber heels, which protect the foot and thereby abolish much foot strain. Certain industrial positions require individuals to remain standing over periods of many hours. Standing is a continuous muscle strain and therefore more fatiguing than walking, which may require more actual muscle work, but which is intermittent.

Sometimes because of economic conditions people are forced to be on their feet when they are ill and ought to be in bed. In illness the ligaments or muscles of the foot are much less apt to stand the strain. Industrial physicians and military surgeons need to bear this in mind. Both see cases where, because of certain economizing or other reasons, individuals who are in a weakened condition are compelled to work and stand many hours. The result often is a yielding of the structures that hold up the arch in the foot. This leads to a "weak foot" which, unless carefully and sensibly treated, results in a "flat foot" with its concomitant symptoms.

* We acknowledge with thanks the loan of the illustrations in this article from the Editor of *The Nation's Health.*

Poorly-fitting socks and stockings and webbed shoe linings cause much discomfort and augment foot trouble. The "socks of sister Sue" were of serious import on the march, as many a doughboy will recall. The shaggy external appearance of our "trench boot" may have caused some slight annoyance when trying to "doll up" to impress a "jolie mademoiselle," but the smooth unlined inner surfaces made the thirty and forty kilometre hikes possible.

Rubber overshoes, because of their impermeability, interfere with the natural evaporation from the skin of the foot, and if worn too long, react upon the sweat glands.



X-ray of normal foot, showing direction of weight distribution. Note the more direct line from the ankle joint to the heel, demonstrating that the heel is the chief weight-bearing point.

We now come to the ills produced by the shoe itself. Many of the ills are due to the poor fit of a well-constructed shoe, many to the construction of the shoe itself. Of all the enemies of the foot, the czar, Style, stands out pre-eminently. In order to be in style the average person, otherwise intelligent, will gladly bear the pain of ill-fitting pointed shoes. We ridicule the Chinese custom of binding women's feet, but inconsistently tolerate styles that are almost as unnatural and injurious. A narrow foot, small in size, is the desideratum. To accomplish this a normal foot will be pushed and squeezed into a last several sizes too small.

Many shoes are constructed wrongly from heel to toe and from sole to upper. The leather may be too impermeable. A certain amount of air should reach the skin of the foot. Rubber shoes cause higher sensitiveness from an increased perspiration. Patent leather shoes, also, if worn too steadily, make the feet ache. A heel helps the walker to lift his weight in making a step. A high heel, however, instead of helping, greatly increases the work of the foot. In the first place a high heel throws the shock of the weight from the rear of the foot, where it belongs, to the point of the foot, where it does not belong. The heel of the human foot is composed



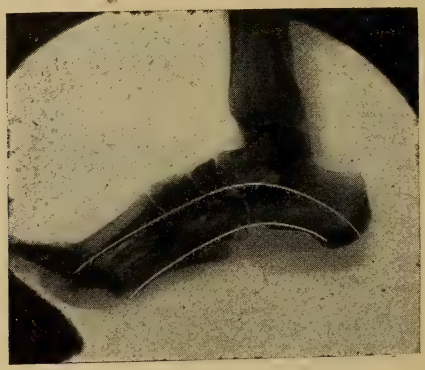
X-ray of same foot wearing a high-heeled slipper. Note the distortion of weight distribution. The heel here carries very little of the load, while the front of the foot (the transverse arch) must bear the brunt of the burden.

of a large heavy bone covered by a cushion of fat and it is so constructed in order to break the blow of the step. However, in a high-heeled shoe, the ball of the foot bears the brunt of the step.

In the second place, high heels, instead of having a broad tread surface, have a very small one, so that the weight is thrown on the wrong part of the foot. The foot instead of being solidly and firmly on the ground is wobbly and unstable, which means that the muscles which hold the foot must work many times as hard to keep the ankle from turning at every step.

Another ill in our modern shoe in many instances may lurk in the "shank" or instep of the shoe. Some firms advertise a flexible shank, others a rigid shank. The main essential in either case is not to have the shank so wide that the inner side of the instep receives no support below to counterbalance the downward pressure from the lacings above.

The front part of the shoe may be mechanically at fault in several ways. Usually the shoe is long enough so that the toes do not press against the tip at every step. Style has decreed for a pointed shoe. In order to adapt itself to the average pointed shoe the natural shape of the foot must be altered. The little toe is pressed toward the midline; the big



The longitudinal arch. The inner and outer longitudinal arches are sketched into this x-ray photograph of a normal foot. Note the flattened external arch, which bears the weight, and the high internal arch, which gives the foot its elasticity. This picture was taken with the foot tilted slightly out of a direct lateral position.

toe, instead of being parallel with the foot, is also bent toward the midline. Normally all five toes point straight ahead. In the shoe the little toe is deflected medialwards, the fourth toe slightly, the middle and the second toe may point straight ahead, while the big toe is again turned medialwards.

The foot in a natural gait points almost straight ahead, like medium step or something like a moderate pigeon toe. This is not considered elegant; "out-toeing" is supposed to be more graceful. To produce this the shoe is flared or turned

so that the "out-toeing" effect is brought about. Another harmful influence is the purposeful twist in the last so that the foot is slightly rotated, lifting the outer margin upwards and allowing the arch to drop a very small amount. This is done by manufacturers so as to prevent the shoe from "running over" on its outer border. In this way the weight is thrown from the outer margin of the foot, where it naturally belongs, to the inner margin of the foot.

A shoe may possess one or all of these defects. These errors in construction for the most part are taken care of by the



Showing the comparative outlines of shoes conforming to the normal outlines of the foot and the hampering requirements of a dress slipper.

intrinsic medium of the foot. However, to do this the foot must be continually adapting itself to unnatural conditions. Sooner or later some condition such as fatigue and a twist of the ankle may be superadded to the burden the foot already bears and an unpleasant train of weeks is precipitated. It is now in order to discuss a few of the sequelæ of poor shoes.

Common Foot Troubles

Corns:—The little toe, being small, weak and unprotected, is the first part of the foot to suffer in the endeavor to force a "D" foot into an "A" last. The pressure is not constant, but

is augmented by stepping on, and diminished by lifting the foot, resulting in a rubbing motion as well as pressure. Luckily the skin reacts to the stimulation, and instead of being worn off and causing an ulcer, forms its own protection. This protection or callous increases in size and, extending downward deeper into the skin, brings about the exquisitely agonizing condition known as a corn. Remove the cause for the corns and the corns themselves will disappear with a speed and sureness equal to the claims of any "corn cure" ads. Renew the cause, and the corns very shortly will also reappear.

However, the corn does more than just ache and instigate profanity and homicidal tendencies in crowded street cars



The imprint of a normal foot.

and elevateds. Each step is painful. Therefore, at each step the voluntary or involuntary effort made to tread on a part of the foot which will not increase the pressure and friction against the corn involves an abnormal use of the foot, increased stress, and eventually pathologic changes.

Bunions:—A somewhat similar proceeding occurs on the opposite side of the foot, that is, the big toe side. The big toe is crowded over medialward. The phalangic-metatarsal joint becomes more prominent. Friction over this joint causes irritation over the metatarsal head. There are, of course, underlying factors which bring about bunion formation such

as congenital enlargement of the head of the first metatarsal, congenital deflection, sesamoid bones, etc. There is no doubt, however, that the tendency to this condition is augmented by improper shoes, and it must be realized that the shoe, at least as far as symptoms are concerned, is a factor of the greatest importance. When a bunion has once formed, the deformity persists. A broad shoe, a shoe which will not crowd the big toe, which will hold the heel and instep firmly and place no pressure upon the head of the first metatarsal will in most instances give relief from symptoms. In mild cases this will be sufficient and no further treatment is required. In other cases operation is called for, but after such an operation the



Third degree flat foot. In a condition like this the bony symmetry of the foot is destroyed. Pains and aches and many ills are in its train.

patient should be advised especially regarding shoes. Here again, as in the case of the corn, due to pain and deformity, abnormal function leads to greater abnormality of anatomy and function.

Callouses:—Any increased strain on the longitudinal arch will likewise cause an increased strain on the metatarsal arch (the transverse arch). Also, as we have mentioned, the high heel is a factor directly causing undue weight-bearing of the transverse arch. The result of an increased amount of work

of the transverse arch is that the arch gradually collapses and the head of the metatarsals, especially the third, instead of being directly weight-supporting toward the end of the step only, that is, while the entire weight is being rocked from the outer side of the foot on the inner side, is directly weight-bearing the whole time. A malformation of the longitudinal arch with the increased strain may bring about the same condition. The elasticity of the transverse arch is diminished and the head of the metatarsal strikes the ground with an unnatural jar. The result is callous formation, especially under the head of the third toe, pain in this region, and a condition called metatarsalgia. In a great number of cases not only the callous but also the pain will disappear with appropriate strengthening of the main or longitudinal arch of the foot.

Weak Foot and Flat Foot

How do shoes affect the longitudinal arch? Or better, what rôle do shoes play in the development of "weak foot?" The term "weak foot" is preferable to "flat foot" because the foot which causes the greatest amount of discomfort is not a flat foot, it is a foot which will become flat eventually but which still has a normal appearing arch. However, the supports of the arch are weak; after a certain amount of strain the arch does flatten but speedily returns to its normal shape when rested. A *bona fide* flat foot gives comparatively little trouble. In order to understand what a weak foot is and how it is caused, a knowledge of the mechanism and function of the foot is necessary.

In the normal foot, the weight is transmitted through the bones of the leg to a bone called the talus which forms a hinge. Through the talus the main weight is borne by the broad heel bone called the calcaneum. The weight of the rest of the body is borne by the forward part of the foot, but to a very much less extent. The arch of the foot is composed of the smaller bones. The outside of the arch is comparatively flat. The inner border of the arch on the contrary is high. When weight is placed on the foot the outside of the arch rests practically its entire length on the ground, the inner side of the arch, however, is preserved. The arch has most aptly been compared to a series of springs, the outer spring being flat and rigid and the inner curved.

A cross section of the ball of the foot reveals another arch, the transverse arch, which also can be compared to a spring of slight curvature. What happens when a step is taken is that the heel of the foot hits the ground first. The fat pad over the calcaneum takes up most of the jar. When the entire foot lies on the ground the weight is supported mainly by the heel, but also by the springs which form the arch. The outer spring flattens so that the entire outer side of the foot rests on the ground. The inner spring also flattens slightly, thus giving resiliency to the foot, but the inner part of the instep does not touch the ground. The foot is thus balanced



It is hard to understand why out-toeing should popularly be considered elegant. The shoes are flared so as to bring about the desired gait at the expense of poise, grace and nervous force.

on the arch, just as the chassis of an automobile is balanced on its springs. As the step continues the powerful muscles of the calf pull the heel up and the weight is placed on the ball of the foot through the transverse arch. Here again the spring action of the transverse arch gives a resiliency to the step. The first push of the step is made by the big toe.

The framework of these springs is made up of the bone of the foot, held together by the ligaments and muscles. Any weakening or stretching of these ligaments and muscles will weaken the springiness of the foot. Fatigue brings about such

a weakening and allows a consequent stretching. Any abnormal gait causes fatigue. In a few minutes an unnatural gait harms the foot more than hours of an easy normal walk. Any of the abnormal conditions already discussed—corns, bunions, callouses, brought about by webbed linings, etc., cause a voluntary or involuntary effort to spare the part of the foot. This means an abnormal gait, speedy fatigue, and a consequent injury to the supporting mechanism of the arches. For example, a walk which throws the weight on the inner side of the foot forces this part to do an undue amount of work. The weight, instead of resting on the ground, will have to be held up by the muscles and ligaments which form the high inner arch. It is at once apparent that this calls for a great amount of extra strain. It is just as if we tried to rest by forming a bridge with our head and heels instead of lying flat. The arch naturally stretches under this strain and causes the symptoms of flat foot. It is impossible for the foot to function well if any part of it is impaired. There applies here the fable of Æsop in which the various organs of the body claimed that the stomach was doing none of the work, but was getting all the food, but in the strike that followed the organism as a whole suffered.

Remove Cause Is Remedy

If recognized early enough the great majority of weak feet can be remedied by removing the cause of the abnormal action. Weak feet can be prevented by preventing abnormal mechanical action. Arch supports may have a place in the treatment of weak feet, but only a very minor place. The normal arch needs no support. A tired arch does. For this reason it is often wise to counsel shop girls, clerks, motormen, and other workers who are on their feet a great deal, not to wear bedroom slippers or tennis slippers after a strenuous day's work. A tennis slipper or bedroom slipper gives no support to the arch. Or it may be wise to advise that if they do want to change to slippers when they get home, to wear some sort of an arch support at these times. A well fitting and well constructed shoe will not only prevent the conditions described, but will in the majority of cases cure them. As long as undue pressure or friction is brought to bear on the little toe, a corn will form in spite of any or so-called remedies. Only when the trans-

verse arch is relieved of the abnormal strain, whatever the cause may be, will the metatarsalgia disappear. The symptoms of a bunion in most instances are relieved by removing the noxious conditions which, together with the anatomical features, definitely cause the symptoms. A weak foot is cured by readjusting the weight-bearing, by removing the actions which have weakened the supporting muscles and ligaments. A well-constructed and well-fitting shoe should hold the foot snugly, should not press unduly on any one place. The heel and arch should be firmly held. The front part of the foot should be free to expand as the weight is shifted. The heel should be broad, giving a large and stable tread surface. A rubber heel is an advantage because it takes up a certain amount of the jar. The shank should not be so wide that it offers no counteraction to the downward push of the lacings. The leather itself should not be entirely impervious to air.—*The Nation's Health.*

Book Reviews

The Origin and Development of the Nervous System from a Physiological Viewpoint, by Charles Manning Child, Professor of Zoology, University of Chicago. The University of Chicago Press, Chicago, Ill. $1.75 net, $1.90 postpaid.

This book is primarily a treatise and consideration of recent experimentation and investigation of some of the physiological conditions which antedate the development of the true nervous system, and which are closely associated with its development. It attempts to establish the existence of physiological continuity between the simple quantitative gradient in physiological conditions and the central nervous system. The nervous system being an organ of integration, continuity must exist between the primary factors concerned in determining those relations between regions or parts which make the organism an orderly whole. The book is devoted largely to the study of this excitation-transmission relationship and to the close integration of the whole nervous system.

HYPERTENSION

While it is to be regretted that a certain minority of the medical profession are disposed to ignore the significance of high blood pressure, it is, on the other hand, a matter of congratulation that there is a steadily growing disposition on the part of most physicians to recognize that Hypertension always means something. In other words, the existence of high blood pressure is always a danger signal.

It needs only a knowledge of the fundamental principles which underlie the production of increased vascular tension to convince the most sceptical medical man that he should be constantly on the lookout for this symptom; that having found hypertension to exist, he should very carefully study his case in order to determine the cause or causes operating to bring about and maintain the high blood pressure, after which it goes without saying that he should administer suitable remedies to overcome the condition and prevent its effect.

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CONTENTS

EDITORIAL

Page

The Good(?) Old Days 115
Help from within 119
Eclampsia 121
Dr. Ernest Cullen 124

ORIGINAL CONTRIBUTION

Canadian Oto-Laryngology D. J. Gibb Wishart M.B. 127

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VOL. 52 TORONTO, OCTOBER, 1922 No. 4

Editorial

The Good (?) Old Days

We were fortunate enough to secure a diary kept by a house-surgeon of the Toronto General hospital for the year 1872. Below are four of the entries, which indicate something of the work that was being done and of how it was done in those long-ago days. It is unfortunate that the books containing many histories of cases taken at the hospital were destroyed early in this century. Since about 1904 histories of all patients have been taken and kept.

Monday, October 14th:—This afternoon about 2 p.m. went to Dr. Graham's to have lessons in the primary subjects. To spend two hours "grind" with him three nights in the week; $12.00 for the whole.

Friday, October 25th:—Saw a post mortem. A woman about thirty; died a day or two ago. Came to the hospital in a prostrated condition. Didn't learn anything about her, as she was unable to tell her name. A small stone was found in the *ductus communis choledochus.* She was jaundiced. The omentum was all inflamed, parts of the small intestines black, and the liver firmly adherent all along the inferior portion.

Saturday, October 26th:—Dr. Bethune operated on a healthy looking man (sailor), aet. 59. Removed the left eye. Received a blow from a stick some thirty years ago. Suffered only a slight inconvenience up till within the last few years when the sight of the right eye became affected. (He had a rupture also.) Only used four instruments. Cut through the sub-conjunctival tissue; divided between hook and eyeball, keeping close to the eyeball—less danger of hæmorrhage by so doing. The muscles next divided. Left the speculum in for a short time. Then removed it and filled the cavity with lint; placed a damp sponge over this; then bandaged both eyes; and ordered that the patient be kept in a dark room for a few days. Also ordered the patient not to meddle with his face. While vomiting slightly, his false teeth fell out, mouth should have been examined previously as he might have choked.

Tuesday, October 29th:—Dr. Aikins operated on a man about 45 years of age, amputating the left leg just below the knee—about three inches. A case

of traumatic gangrene from injuries received on the railroad. External portion of the foot quite black and frightfully lacerated. Some days since the accident occurred. The leg broken near the knee, and in the lower third also. An incison beginning about three inches below the knee was carried from the outer to the inner surface anteriorly, dividing the tissues to the bone. The knife was then pushed in from the internal side, and, coming out beneath the tibia and fibula was carried down for about five inches. The bones were then sawed across, and on sawing it was found the tibia was fractured longitudinally and transversely, just at the place selected. Dr. Aikins twisted the longitudinal piece off and sawed a little higher up. The arteries were then tied and the parts sponged. Left the pack till all oozing had ceased.

Friday, November 1st:—This morning up about 7 a.m. and all forenoon went about with John, and till evening about 4.30 when I went to the lying-in I found two cases who had been confined and no one to attend them properly. There was extreme hæmorrhage in one case—a nice respectable young lady from Montreal. Her name was. . . .the betrayer's name said to be. . . .of the G. W. Railroad. The placenta was still there; seemed contraction of the os on part of it, part of it being in the vagina. I suggested the propriety of removing it, but Mrs. Beale (the matron) opposed my wishes, saying she had sent for Dr. Temple, she asked me to go round and see if Dr. Temple was in. He was out. Went to Dr.

Russell's and Dr. Hodder's and then returned. Suggested the propriety of removing, but she shook her head. She then asked me to go for Dr. Bethune; I did so, but like all the rest, he was out. I wrote "5.10" on his slate and told him to come immediately. I came back and suggested the propriety of dilating the uterus and removing the placenta, but was asked if I would go again to see if Dr. Temple was in now. I went and found Dr. Temple had just returned home. He came immediately, drove round, his carriage being still at the door. When he arrived Mrs. Beale met us and told us it was all over—meaning that the placenta was detached and removed. The uterus was still high up and the pulse absolutely gone. Feet cold; also hands, and general pallor. The uterus almost immediately contracted down firmly to the touch. She rallied after the free use of brandy and ergot, and we left her. Dr. Temple returned in a very short time, and though there were no signs of external hæmorrhage, she just asked if she would live till to-morrow till her mother would come——and in a few minutes was dead.

To give one an idea of the cost of a medical education in those days, the following item lying loosely in the diary was noted:—

1st year $276 for board.
2nd " 300 " "
3rd " 320 " "
4th (9 mos.) 340 for board.

Help from Within

Every physician has read of, or has met, in the course of his practice, rare cases of assured neoplastic malignant growths that mysteriously disappear without operation or any other extraneous treatment. The diagnosis is definite. X ray and other diagnostic reveal the presence of inoperable tumor. Everything points to the usual fatal termination, when suddenly a change occurs and the growth disappears apparently of its own accord.

The noted Munich professor of surgery, Dr. Sauerbruch, in reference to several such cases coming under his own observations, asserts his belief that the cures are due to certain healing agents latent in the body. He relates two such instances, one of extended cancer in the thigh, another in the breast—both inoperative—where, beyond the administration of morphine to still excessive pain, no treatment was given. Yet quite suddenly conditions changed, the patient improved and the tumor gradually disappeared.

Professor Sauerbruch gives credit to another noted surgeon, Dr. Konetzky for first lifting the veil of this healing activity:—

"While he was operating on a cancer of the stomach he removed a small portion of the cellular substance for later examination. He found that the epithelial cell groups of the tumor had been burst by the surrounding cellular element and that a large number of the cancer cells had been isolated."

Other German savants have also experimented and are confirming Dr. Konetzky's reports.

Dr. John Brown

One of our great Canadian medical teachers was wont to advise his pupils to approach their patients with a cheerful seriousness and a serious cheerfulness. A similar mood was that of John Brown, according to Andrew Lang who wrote in an appreciatory obituary notice of him, that the expression of his face exhibited the blending of mirth and pathos. One of Brown's descendants qualifies Lang's description somewhat by saying that gravity and seriousness were Brown's distinct characteristics, the seriousness, however, relaxing into an honest and cordial smile. Good humor and kindness, sense and intelligence, his scion adds, were assuredly present, with a look of gentleness and benignity, which did away with any idea of severity or insistent dogmatism in his thought or temper.

"It was a face," the annalist continues, "to captivate easily confidence and affection, and it was set off with a simple charm of manner and address."

"He walked slowly—deliberate in this as in most other things; perhaps did a good deal of thinking as he walked; certainly a good deal of his observing."

It is further related of John Brown, that he had the freest, brotherliest soul one could meet; but that this did not arise altogether from the curious sweetness, serenity, and generosity of his moral nature, but from a combination of these with a singular breadth of intellectual view.

In his practice he had the "almost unconscious

art of creating an atmosphere of cheer around the sufferer, who was comforted, he scarcely knew how, for there were no comforting 'considerations' thrust upon him. Comfort came in some indirect manner, without being announced, and without any assumption on the part of the comforter. It was this that made his visit to the sick man better than the medicines which he gave him; and the languor and pain of the sick bed were often relieved by the mere visit, or even the expectation of it."

We shall all make better medical men if we read the biography of John Brown and his own writings. Everyone knows Rab and his Friends; but fewer medical men know of his essays on Locke and Sydenham and other most excellent essays in his Horae Subsecivae.

Eclampsia

One notes with much interest a summary on Eclampsia which was given to the Royal Society of Medicine. The histories of 547 cases in several London hospitals covering a ten year period were reviewed. The maternal mortality was 22.1 per cent. The study showed the malady to have no periodicity or epidemic character, 69.8 per cent. occurred in primiparae. Women with twins are more susceptible than those bearing a single babe.

The cases were classified as "mild" and "severe." that the effects of treatment might be studied with

more exactness. The points noted with respect to effects on prognosis were coma, pulse rate, temperature, number of fits, amount of albumen, degree of œdema, and blood pressure.

385 cases of coma were analyzed. Mortality 34.2 per cent. The mortality in cases shewing deep coma was 63.4 per cent.; contrasted with a mortality of 5.09 per cent. in those without coma. A pulse-rate of over 120 in one group of cases shewed a mortality of 40 per cent.; where the pulse was below 90, 5.4 per cent. A temperature of over 103° F. was of grave prognostic import—74.3 per cent. mortality. Below 100° F. 5.9 per cent.

The average number of fits among those who recovered was 6.8. Among those who died 12.7.

In a group shewing urine becoming solid on boiling, the mortality was 25.3 per cent. In those shewing no albumen the mortality was *nil.* The absence of œdema proved of grave significance; likewise a blood pressure of over 200.

The disease proved more severe when occurring between the 28th and 36th weeks than later.

In 295 cases in which the fits ceased after delivery the mortality was 21.6 per cent.

The results of obstetric treatment shewed that natural delivery or that by simple methods was the safest; rapid forcible delivery bad.

Elimination and morphia was the combination most used in treatment.

Vivisection proved of little benefit and in some cases did harm. Those treated by morphia and other sedatives did not respond encouragingly.

In one certain group of cases, causes of death were cerebral hæmorrhage, uræmia, suppression of urine, heart failure, shock, chloroform poisoning, general peritonitis and hæmorrhage.

The committee concluded that the results of their investigations were profoundly unsatisfactory.

Our readers will note with interest and profit a few points brought out incidentally: (1) That medical treatment has seldom been carried out upon any definite plan *and has also been, generally speaking, excessive.*

The committee adds: "It is impossible to avoid the conclusion that the majority of the *fatal cases were over-treated, and that in a considerable number the excessive treatment must have been a contributory factor in bringing about the fatal results.*"

"In one of the fatal cases two pints of blood were taken by vivisection, and the patient was delivered by *accouchement-force.* This case was classified as 'mild on admission,' and it seems probable that any chance she had of recovery was destroyed by the severity of the remedial measures employed. In two cases there was post-mortem evidence of acute tracheitis and œdema of the lungs; in both, croton oil had been administered; and it seems probable that here also the methods of treatment employed were, to a great extent, responsible for the fatal results."

In view of these supplementary findings, practitioners of obstetrics would be especially helped by reading the first chapter of that excellent volume "Principia Therapeutica," entitled NON NOCERE.

Dr. Ernest Cullen

To those of us who knew him intimately the death of Ernest Cullen, early in July, in Detroit, came as a great shock. On Monday he was in perfect health. At 2 p.m. while in his office he vomited about an ounce of blood. At 6 p.m. he called in a colleague who placed him on a table, but feeling that he could not stay there he was put on the floor. He then had a terrific hæmorrhage—some 70 ounces. He was rushed to the hospital and felt better next day. On Wednesday he had another hæmorrhage, and despite four transfusions he died at 8 p.m. A post mortem revealed varicose veins of the esophagus and cardiac end of the stomach. Three of the veins had ruptured. He suggested what the trouble was; which tentative diagnosis was acquiesced in by one of the examining surgeons.

Dr. Cullen was buried in London, Ontario, one of his early homes—being the son of an itinerant Methodist minister, his boyhood was spent in various places.

Dr. Cullen had only been married a couple of years. He leaves a wife and baby daughter. As is probably known to our readers, he and Dr. Thomas

Cullen, of Baltimore, were brothers, and were greatly attached to each other—a trait of the whole family.

The deceased was graduated from Toronto University about 1904; practised as an interne in Toronto General Hospital. Thence he went to Johns Hopkins, where he served as an interne and resident, acquiring a splendid training in his specialty—gynecology and abdominal surgery. About 1912, he went to Detroit to practise. His abilities were at once realized by the profession there with whom he very soon became exceedingly popular. He received an appointment in his special line of work in Harper Hospital and also a professorship in the Detroit College of Medicine.

Though somewhat late in getting into his niche, Ernest Cullen jumped into prominence rapidly. He has already made a number of contributions to medical literature and had made a good start in his professorial duties.

Dr. Cullen served with the Harper Hospital Unit in the Great War.

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Toronto ——— Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

CANADIAN OTO-LARYNGOLOGY

Dr. D. J. Gibb Wishart, Professor of Oto-Laryngology, University of Toronto.

Read at the Ontario Medical Association, June 31st, 1922.

An experience of thirty-seven years of professional life during practically all of which I have been actively engaged in teaching, permits me a fairly extended view of Canadian Oto-Laryngology at least, but the younger practitioners of the specialty may be uninformed as to its development in Canada, and therefore interested in this paper.

The specialty is, as you are aware, of comparatively recent growth, and even yet my friends the surgeons are too prone to consider it but a side issue, really a branch of surgery and subsidiary in every way.

One of the oldest American Universities—Yale—still places Oto-Laryngology under the Chair of Surgery, and in other important centres of teaching, the Professor of Surgery arrogates to himself the complications of mastoid inflammations, and cancers of the larynx, and leaves to his assistant the oto-laryngologist lancings of the drum membrane, treatment of deafness, and larynx brushing. The removal of tonsils of course belongs to nobody—anybody can do such a little thing.

It is unfortunate that this state of affairs exists, but in view of the indifferent preparation which many of us make for our practice as a Specialist perhaps these surgeons may be forgiven for attaching as little importance to our subject as we attach ourselves. In the earlier days of the specialty, when much of the success depended upon the sleight of hand

exhibited in removing growths from the larynx by the indirect method—the would-be specialist devoted more time, and spent more money in acquiring his technique than is necessary to-day with facilities afforded by the bronchoscope, suspension apparatus, electrically illuminated speculae, etc., but to-day the existence of special hospitals with prolonged services for the interne provides much more accessible and possibly profitable opportunities for study.

The subject naturally divides itself into two absolutely distinct sections, the Undergraduate and the Postgraduate. As a student in McGill, I received a few lectures upon the subjects of the specialty and passed a viva voce examination with perhaps one or two questions included in the papers on medicine and surgery, but I have no recollection of seeing a head mirror or examining the patient. I presume the same system was followed in the University of Toronto. When attached to the Ontario Medical College for Women I went to much trouble to train the ladies in the use of the ophthalmoscope and the examination of the nose and throat, but in Trinity Medical College, this training was purely elective, and subject to a special fee.

Instruction in the subjects of the specialty with clinics was given in Trinity Medical College and doubtless also in the Toronto School of Medicine, as far back as 1880; but obligatory attendance by all students, with examination, was not required till 1903. Some years later the Medical Faculties of Toronto and McGill instituted a yearly inter-university conference, and since 1912 the courses given in the two institutions have coincided so far as the Oto-Laryngology is concerned. From that date every student issuing from these Universities has required to prove his ability to examine fully the ear and the nose before receiving his license to practise, and with this end in view has received personal supervision in the use of the instruments of examination.

For the past eleven years the course has been as follows, [1]

Fourth Year—

1 The normal anatomy of the ear, nose and throat.

2 The methods of using the head mirror and the various instruments required in examining the ear, nose and throat.

3 The ordinary tests for hearing.

4 The recognition of the ear, nose and throat, in their normal conditions, as exemplified by clinical material.
Time: forty hours in classes of sixteen.

Fifth Year—

1 For the purpose of studying the commoner pathological conditions affecting the various organs, twenty hours in classes of six.

2 Twenty hours of lectures delivered to the full class, upon the various diseases of the ear, nose and throat, ordinarily met with by the general practitioner.

In the earlier years the instructor in Oto-Laryngology was forced to work at a great disadvantage, for no equipment was provided by the College or Hospital, and he had to depend on one lamp to examine all patients, and teach all students, but the building of the new Toronto General Hospital in 1912 afforded opportunity to do away with this difficulty, and after visiting the clinics at Rome, Heidelberg and Vienna, etc., I was enabled to prepare the plans later embodied in the present Oto-Laryngological Clinic of the Toronto General Hospital.

This clinic was the subject of a special article written by Dr. Sproule (Manson), which can be referred to if desired. Suffice it to say that in the Out-Patient Clinic alone sufficient lights are provided for the examination of twenty-three patients at one time.

Formerly again, it was not the custom to assign beds to this special department, but for the last ten years, we have had the advantages arising from a service of twenty-one beds and over.

The University of Toronto has therefore been well to the fore in the value attaching to the specialty—and McGill has at least kept pace with us—and possibly been often in advance. Upon these two institutions has fallen the responsibility of leadership in Canadian Medicine, and their attitude with re-

gard to this specialty has not been unfruitful in helping on the cause elsewhere. We have established the principles of—full departmental responsibility, with education through two years of the course, compulsory attendance, examination by specialists, and a reasonable quota of beds and clinics.

The undergraduate is taught merely to recognize that a sick ear or nose falls to his responsibility—to the same extent as a sick heart or kidney—but no attempt is made to impart the information, which belongs to the fully trained specialist; this is for post-graduate instruction only, and if there be an impression abroad that the subject treated by this Department of these Universities is handled in any other spirit than in that of the axiom so adequately stated by Gradinego: "What doctors need in their daily practice should be made compulsory," a careful investigation of the curriculum, and observation of the methods of teaching will speedily result in its elimination.

Upon this Continent there is a marked progress in Medical Education. The Carnegie investigation of 1909 resulted in united continental efforts in this direction; and the time is nearer when the subjects required in a Medical Education, will be fully understood and balanced, so that nothing shall be omitted which is necessary, and nothing introduced which is not cogent. This time is not yet, and when it does arrive Oto-Laryngology among the specialities may be found anaemic or hyperaemic, as the case may be, and suitable treatment must be meted out. He who has the true interest of a well rounded education at heart must often long for the rise of an impartial and all knowing dictator who can be depended upon to be equally fair to all; until he comes we must individually follow our light.

In 1913, a committee representing the specialists of the continent issued a pronouncement [2] embodying their ideas as to how the course in Oto-Laryngology should be covered in the undergraduate teaching, and laid down the following points;

1. That each student of medicine be entitled to receive sufficient instruction in Oto-Laryngology to enable him to deal with the parts concerned as intelligently as with the rest of the human body.

2. That for this purpose he should be familiar with the anatomy of the parts, possess a practical working-knowledge of the simpler instruments of examination, be able to recognise familiarly the normal appearance of the structures, be practically acquainted with the pictures presented by the acute inflammations, and the commoner diseases of the organs involved and how to treat the same. He should further be instructed to recognise the symptoms of serious complications, the wisdom of early associating the greater knowledge of the specialist in the care of his patient, and the dangers associated with all operations upon the parts involved, except in the hands of the competently trained specialist.

3. That for this "course of instruction" a share of each of the two final years of the medical curriculum be essential.

4. That the said "course of instruction" should embrace both clinical and didactic teaching, preferably intermingled, the clinical to be greatly in excess of the didactic, at least in the proportion of three to one.

5. That clinical instruction be given to small groups of students, preferably in classes of six, each receiving individual instruction, and this together with the didactic work should extend over a period of at least forty hours in the time of each student in each of the two years.

6. That operations should not form any part of the above course, except that so far as may be possible each student should be permitted to assist at the performance of the simpler varieties, that he may become practically acquainted with the methods of procedure and the objects sought.

7. That a special separate examination in Oto-Laryngology preferably clinical, conducted by the professor of Oto-Laryngology, form a part of the final examination in medicine of every university, and every licensing body.

8. That a copy of these resolutions be forwarded to the medical faculty of every university and college of medicine, as well as to every state or provincial examining board, in the United States and Canada.

A perusal of the majority of calendars of the class A colleges for 1920—1921, reveals the fact that a real endeavour

has been made to follow the principles then laid down, and a corresponding advance has been made in the education of the men now being graduated in medicine. In thirty-two out of fifty-eight (calendars examined) of the sixty-one class A colleges, instruction is spread over the two final years, in one it is given in three final years, in six it is confined to the penultimate year, and in nineteen to the final year. In all cases there is a compulsory examination conducted by the teachers, who are all specialists.

The attention of the heads of Oto-Laryngology in the medical departments of our universities must again be called to the urgent need of limiting their staffs to the well defined object sought in *undergraduate instruction,* viz; knowledge of the anatomy, the normal appearance of the parts, the ordinary variations from the normal, and above all, absolute familiarity with the head mirror, the probe, and the simpler instruments of examination. Beyond this the undergraduate course should not go. The student has no call to see operations, to make differential diagnosis, etc., his duty is to know when to summon special aid, and for this purpose to be able to recognize "the beginnings of evil."

The real reason why our university teaching falls down is because the instruction, to be thorough, must be individual, the instructor must personally see to it that the student *sees* each nose or throat for himself, and be convinced that each picture seen by the student is the correct one. Group teaching is largely impossible, except in anatomy and by way of introduction. Another problem is the difficulty of convincing the student of the necessity of constant practise upon his part in order to familiarize himself with the head mirror and probe.

If undergraduate teaching be limited along the lines laid down, it can never lead to specialization, or be reproached, as trespassing on the time required for medicine, surgery, and midwifery, in an overcrowded curriculum.

In this connection it is interesting to quote from the recent Inquiry into the Medical Curriculum by the Edinburgh Pathological Club [3] where the following principals of teaching the specialty are laid down;—"To acquaint the undergraduate with the relation which the organs bear to general disease;" "no finicky details, no elaborate descriptions of operations; no

minute account of mere conditions; how can we expect more than the simplest essentials from our pupils." "The importance of the inter-relationships of aural, nasal, and laryngeal diseases with general medicine and surgery can hardly be overemphasized, and the future practitioner should early be taught to take a broad view of such subjects, and not to confine his diagnostic facts to the special region where symptoms appear."

It is also to be noted with gratification that the amended (1922) Regulations of the Conjoint Board in England, provide for compulsory instruction and examination in diseases of the throat, nose and ear.[4]

I may be pardoned at this juncture if I let off steam, and speak for a moment of the undergraduate view-point. In this there is little or no improvement, during these thirty-seven years. He still believes that a curriculum includes many subjects which can be safely forgotten, once the examination be over and done with, and among these, I doubt whether the anatomy or the use of the head mirror is the favorite subject of election. He opens his mouth, and swallows his mental food, but seldom or never chews the cud, and what becomes of the pubulum it is hard to say; certainly he digests but little of it. He must not attend a lecture before nine, or after five, and to use his lunch hour is out of the question, his evening enjoyment must be untrammelled and attendance upon the student dances is *de rigeur*. The occasional "night off" is replaced by "spooning with the girls." I sometimes look on and wonder if Co-education is to blame, and am not altogether satisfied with the present-day student or his masculinity.

The question in which we are chiefly interested, however, is rather what facilities is Canada affording in the way of postgraduate study, to enable those who would be specialists in Oto-Laryngology to obtain their training within the Dominion. To this I must reply—few indeed. Apart from the Royal Victoria Hospital in Montreal and the General Hospital in Toronto, there is no institution in Canada, so far as I know, which admits full time internes for Oto-Laryngology. In the first of these the period of service is two years, and in the latter sixteen months. Between them about three men can be turned out every year. Those who have sought entrance to these services so far, testify to their value. If the training received be

finished by a year of further study abroad, the end product will prove to be reasonably prepared for this special field.

Those who wish to become specialists should realize that there is nothing equal to the close contact with patients obtainable during such an internship, to drive home the knowledge required. Clinics in a post-graduate institution, by the Solons of any specialty, can never serve the same purpose. These are only useful as refresher courses for the man already trained, who needs a holiday, and a thorough oiling of the machinery.

At the same time I must confess that the conditions under which such an interne works are not perfect—the laboratory equipment, the trained supervision, the time to study, and the library facilities are too slender as yet. The system evolved by the University of Toronto, which is not as yet underway as the income receivable from the Rockefeller bequest is insufficient—apparently promises something adequate. Under this the man proposing to learn a specialty, will take a first year in the laboratory, a second as junior resident interne, a third as senior resident interne, and a fourth or more as surgeon in training. In his third year such a man would live in and receive $1,000.00, while in his fourth, he would live out, receive $2,500.00 as a maximum, and be allowed to practise privately for two hours a day.

When such a system becomes fully workable we can, for the first time, produce Canadian trained specialists, and avoid the need of seeking foreign lands to render ourselves fit to practise.

The two institutions mentioned cannot, however, be expected to accommodate the necessities of their Provinces, let alone the Dominion, and it is to be hoped that all Canadian University Hospitals will establish similar services for their internes, and that other hospitals will follow suit.

Naturally there exist objections to such an arrangement. The Rotary Interne claims his right to obtain a look in upon the specialties, and except in large centres the special clinical material is not available in sufficient abundance. It all depends upon the view-point as to what right the seeker after knowledge possesses in institutions that are maintained out of the public purse. When the Interne is a rotator—the whole of the care of the patient depends upon the attending staff, to the

smallest detail. Its members alone obtain any knowledge to be derived from the particular case in hand—to the exclusion of the student, and what is most essential research becomes impossible from the lack of assistants in training. Advance in our knowledge can only come by research. Is Canada to be a land devoid of research in Oto-Laryngology? Further the establishment of purely special hospitals is to be avoided if the best results be sought, because in the general hospital, with wards devoted to specialties, the Staff and the interne obtain a wider view-point, and view the patient in relation to his general bodily needs.

Great Britain.

A brief note as to the conditions which prevail in Britain will not be out of place. Those who desire more extended information are referred to my article on Oto-Laryngologic Education in the July Laryngoscope of 1921.[5]

In Britain—the Councils of Oto-Laryngology and of Otology, of the Royal Society of Medicine, a year ago memorialized the Royal College of London, with the view to the granting of a Diploma in Laryngology and Otology by the Conjoint Board.[6]

If this request be granted, and there are precedents, the question will be solved for Britain at least, and largely for the empire.

The next step will assuredly be that, of all appointees to the Staffs on Oto-Laryngology of the Universities and Hospitals, the diploma will be demanded as a guarantee of knowledge and standing. With such an example the public will quickly follow suit, and thus *without legislation,* the training of the specialist will be efficiently standardized.

Until this diploma is made possible, there is no hall-mark available, however, although certain bodies have provided tests which are inefficient because not uniform, and because they treat knowledge of Laryngology and Otology as a side issue. For example, the University of Aberdeen permits candidates for the higher surgical (Ch. M.) to take Oto-Laryngology as their special subject. In Edinburgh, the Royal College of Surgeons recognises Oto-Laryngology as the special subject for a

candidate in place of Operative Surgery. At the University of London, Laryngology and Otology are among the subjects which may be selected for examination for the Master of Surgery Degree.

In all of the above instances, it would appear that the candidate must pass also the papers in Surgery set for the higher degree; in other words, he must prove himself as efficient on questions concerning the pelvic fascia, as in those of the ethmoidal cells. There are no stipulations made, moreover, as to the character and extent of the previous training in Oto-Laryngology. Under such circumstances the above degrees are worthless from the specialist's point of view, and impart no distinctive significance to their possessor.

Many of the Universities and examining bodies have machinery ready to hand whereby the qualification could be made attractive and useful. For example, the Conjoint Board, referred to above, already grants a Diploma in Ophthalmic Medicine and Surgery, and requires of each applicant a definite period of study upon a set curriculum. A Diploma is granted by Cambridge University in Medical Radiology and Electrology upon similar lines.

With the establishment of a recognized Diploma in Laryngology and Otology, a course of study would require to be defined, and provision would have to be made for offering prospective candidates suitable facilities for obtaining the necessary instruction and clinical training. The period of study before the examination could be taken, and subjects which should be embraced, and the standards of knowledge that would be expected from the candidate would require to be carefully considered, and regulations laid down.[7] It would add greatly to the attractiveness of this Diploma, if the conditions were made broad enough to allow of candidates from other countries seeking its franchise.

The necessity of providing reasonable post-graduate courses followed by examination, and Diploma or Degree, for workers in Oto-Laryngology, has been repeatedly urged by the *Journal of Laryngology and Otology,* and by leaders in the specialty, and the present possibility of speedy solution is the result of this propaganda.

There are fewer professors at the head of clinics in Oto-Laryngology, in Britain, than in Germany, but there is a larger number of hospital clinics under the direction of competent specialists. "Excluding Ireland, and also hospitals where the special work remains in the hands of general surgeons, I find that there are at least fifty-five British hospitals, where, in all seven hundred and thirteen beds are set apart for throat, nose and ear cases—this fact alone suffices to prove that, by a large concensus of professional opinion, laryngology and otology are now regarded as special departments, separable from medicine and surgery in the same sense as ophthalmology and gynæcology.[8] Outside of the University of St. Andrews, the National University of Ireland, and the only corporations in Britain which make a definite clinical course obligatory for medical students, and let specialists conduct the examinations. Edinburgh allows a choice between pediatrics and Oto-Laryngology.

I have not, so far, seen any notice of final action by the Conjoint Board upon the petition above mentioned. The Chairman of the Committee of the Society, Dr. Herbert Tilley, informed me last December that the examinations asked for would be of the same standard as the examinations for the F.R.C.S. This would ensure " a sound knowledge of the specialty."

It is advised by Watson Williams that at least two years is needful, "and possibly five years post-graduate work, before a special qualification is conferred."

ITALY.

Teaching in Otology was first provided in the University of Rome—and in Laryngology in the University of Naples—both about forty years ago—by the establishment of special chairs, but in 1912, of the eighteen universities, only eight taught Oto-Laryngology, and of these eight, only one, Rome, had clinical wards. No attendance or examination was, at that time, compulsory in the under-graduate curriculum, but in the final examination the student was allowed to elect Oto-Laryngology and, if successful, receive a certificate which, however, conveyed no special rights.[9-10]

Giacosa advocates the adoption of measures, based on the concrete proposals which have been put forward spontaneously in different countries, to arrive at a common international standard in Medicine.

Thus we see that Oto-Laryngology receives scant courtesy in the very land which has given birth to so many distinguished contributors to its advance as a subject of special study.

FRANCE.

The same remark may be made about France, where according to Gelle,[11] out of the seven Universities possessing Medical Faculties, not one, in 1912, possessed a chair in Oto-Laryngology, although the eye and the skin were so honored. "French specialists" he says, "owe their education to gratuitous instruction, voluntary, not official. The specialist is self created." The undergraduate, however, was required to pass an examination in laryngology under the professor of Medicine, and in otology under the professor of external pathology.

There are some rays of light. "For development, after years of restraint, is at last taking place. In Bordeaux, Lyons, and Nancy, there are well established and well equipped clinics, and courses of instruction have been installed. Further advance is opposed everywhere by financial considerations."

Since 1907, the French Oto-Rhino-Laryngological Society has required of those seeking membership, proof of study of these subjects at a special clinic for twelve months, and a further year spent in exclusive practise of a specialty.

CENTRAL EUROPE.

In the group of countries of which *Germany* was the leading member, and possessed of the largest influence—Germany, Austria, Scandinavia, Holland, etc.—the specialty had, by 1912, gained much greater recognition than in Italy and France.

Mygind,[12] gives the following tabulated information for that year:—

	Universities	Teachers
Germany	19	24
Austria	9	7

	Universities	Teachers (*Cont.*)
Scandinavia	5	5
Holland	5	4
Switzerland	5	3
Roumania	1	1

and makes the further statement, "the highest standard of the specialist is also to be found in Germany."

Von Eicken,[13] in his review of the subject in the same year, says, "In Germany, as in most civilized European countries, our branch of medicine has not yet attained to the position of independence which ophthalmology and psychiatry enjoy." "So far the only Universities which possess professors are Berlin, Geissen, Halle, and Rostack." "In some five universities properly constituted clinics do not exist."

The professional examination regulations, since 1901, require a certificate from the student that he has attended a clinic for Oto-Rhino-Laryngology regularly for six months, but the examination itself for the nose and throat is relegated to surgery, and for otology to medicine, thus voiding to a large extent the value of the examination, and these regulations are not sufficient to ensure that every candidate for state license has to undergo an examination in Oto-Laryngology. Von Eicken does not believe that a change for the better can be expected until the examinations themselves are conducted by specialists in Oto-Laryngology.

There is no control over the assumption of the title of Specialist in Oto-Laryngology, nor any qualifications demanded of those who seek admission to membership in scientific societies.

In Austria-Hungary, Frey [14] tells us that every student is required to attend a six-weeks course (seventy hours) in Oto-Laryngology, but no examination is required for license.

Post-graduate work was started in Vienna, and the university ear clinic, founded by Politizer, in 1873, was the first ever founded in the specialty in the world. There were six different courses on the ear, and as a rule the classes contained not more than ten each. Frey, however, states his opinion that this class work is not sufficient education to make a fully competent specialist, and that the candidate needs in addition two years practical work in clinic or hospital under the close super-

vision of a high class specialist. He takes strong ground against the conferring of a special degree by examination because, "examinations do not prove the real knowledge of the candidate." In Austria-Hungary professors and directors of clinics or hospital departments are selected from among the privat-dozents. The title of Dozent is only conferred by the Minister of Public Education, following a proposition by a board of professors, and given to such only as have *proved their capabilities during many years of clinical practise, and by a number of publications of original research work.* It is almost indispensable to be connected with a university, or to hold a leading position in a hospital, in order to attain full specialist rank in the eyes of the profession and the lay population: As in every-day life, titles such as "Professor," "Dozent," are always used when addressing a person, the general public are kept informed of the degree any doctor holds, and in this way know him to be a specialist of qualification. In this way a number of first-class specialists are created.

DENMARK.

According to Hald,[15] the medical student must attend instruction in Oto-Laryngology for forty-eight hours, but is not required to pass any examination. Any graduate may elect to practise as a specialist at his own sweet will, but as nearly all recognized specialists in Oto-Laryngology join the Danish Oto-Laryngological Society, where admission is obtained by a four-fifths majority in a secret ballot of the members, there is a control as to qualification. No special degree in nose and throat surgery exists.

At the eightieth general meeting of the British Medical Association in 1912, a discussion took place upon the education of the specialist in Oto-Laryngology, and in dealing with the Continental aspect, Mygind,[16] of Copenhagen, made the statement that the specialty was taught in nearly all the universities of Germany, Austria, Scandinavia, Holland, Switzerland, and Roumania, but not at all in Russia, Greece or Portugal, and only partially in the other countries. In Germany alone there were, in 1909, six hundred and two specialists in Oto-Laryngology.

In view of our present stage in the evolution of the specialty, it will be interesting to quote largely from Mygind's summary of the "Defects in the Continental Education and the Remedies therefor."

1st. The early training (undergraduate) must be held as most important. Superficiality in the examination of patients should be carefully guarded against. There must be little stress laid on lectures, and conversely much on practical work and detailed instruction.

2nd. Post-graduate courses, however excellent, do not represent sufficient education for a medical man who intends to settle down as a specialist.

3rd. The education received while acting as an assistant at a Public Special Clinic must be based upon:—

(a) An adequate preliminary education in surgery as a foundation stone. (Eighteen months internship is suggested).

(b) An appointment extending over a sufficiently long period. (Not less than one year).

(c) Sufficient time allowed for the examination and study of each case, under the personal control of the Head of the Clinic. (If the staff be salaried, this control will become more efficient).

His final conclusion is that the status of privat-dozent serves in Germany, Austria, and Italy as an excellent means of raising the standard of the specialty, but elsewhere, failing this method, a compulsory diploma granted by a University or a Special Board should be demanded.

(*To be completed in November issue.*)

Items

THE ACADEMY OF MEDICINE, TORONTO

In the appointment of Miss Edna Poole, B.A., (Queen's University) as librarian of the Academy of Medicine, the Council of that splendid Institution is to be congratulated. Miss Poole came first to Toronto about 1908, to re-catalogue

the Reference Library. She was soon, however, appointed head of the cataloguing Department of the Toronto Public Library. After a short time she had to return home, owing to her father's ill health, but last year was able to resume her library work. In order to be strictly up to date, she took what is known as a "refresher" course at the New York Library, last winter, studying there for three months the most recent methods of library work. Miss Poole is an honor graduate of Queen's, and also a graduate of the Library School at Northampton, Mass. She also held a responsible position in Princeton University. We extend the hand of welcome to Miss Poole, and feel that ere long, under her guidance, the library of the Academy of Medicine will be second to none.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION

The existing medical situation, with its many problems pressing for solution, calls for mature consideration on the part of the American Medical Editors' Association and all its members. Public health matters are of paramount importance, so the Executive Committee and Officers decided to hold the 1922 meeting, October 16-17th, at the Hotel Statler, Cleveland, Ohio, during the Annual Convention of the American Public Health Association. President Frank C. Lewis is arranging an interesting programme for the Sessions and Annual Banquet and those who are interested in presenting papers are requested to get in touch with him at once, giving the title and brief abstract of their contribution, so that it may be properly placed. Many of the profession connected with medical journalism are not members of the A.M.E.A., and members are urged to bring in their associates or send in the names and addresses of prospective members. Our Association is anxious to have all those vitally interested in better medical journalism on its roster. The American medical editors individually can accomplish considerable but in association they are the greatest power for good within and without the profession. Membership is not only a sacred trust but a wonderful opportunity. In returning dues,

members are asked to note their editorial affiliations so that a corrected mailing list may be secured. The By-Laws provide that those who have dropped their journalistic connections may continue as members by paying their dues and attending the meetings. While the A.M.E.A., has suffered an immeasurable loss in the death of its great Secretary, Dr. Joseph MacDonald, Jr., it remains for those who know of his plans and visions, to carry them into effect and to continue the Association as an ever growing influence.

Obituary

PROF. J. J. MACKENZIE

Much regret is felt in University circles at the demise of Prof. Mackenzie, we understand, contracted a streptococcus Pathology in the Toronto University; for the deceased was a favorite with both the teaching and the student bodies.

While in the department of botany originally, no doubt, Prof. Mackenzie's attention was particularly aroused to that portion of it which in the late eighties and early nineties of last century became so important to medicine[2] bacteriology. In those days Dr. John Caven, who had charge of Pathology, gave only a single lecture or two per term on bacteriology. Since then it has taken a large place in the medical curriculum.

In the early nineties Prof. Mackenzie, about that time decided to study medicine, and qualified for M.B. Upon the demise of Dr. John Caven he was appointed to the chair of Pathology, which he filled acceptably until his death.

Prof. Mackenzie, we understand, contracted a streptococcus infection (which terminated in ulcerative endocarditis) while undertaking some research study.

The deceased was a fine lecturer—clear, fluent and logical. He was a good teacher and governed his classes of students through their affections. His was a very kindly nature—not a harsh element in it. He radiated good fellowship.

Prof. Mackenzie volunteered for service in the Great War. He served with much credit in Soloniki.

The subject of this memoir trained a fine body of young men, several of whom became closely associated with him in university medical teaching—notably D. L. Graham, now Professor of medicine; A. Caulfield who has done excellent work in serology; W. L. Robinson and H. K. Detweiler.

MRS. JABEZ ELLIOTT

A strong pulse-beat of sympathy with their able confrere swept through the medical profession throughout Ontario upon the news of the recent, sudden and unlooked-for death of Mrs. Jabez Elliott. In our profession, as in no other, except possibly that of the ministry, does a wife come so closely in touch with her husband's work, or mean so much as an understanding helper and companion. The loss of such an one is great under any circumstances, but when in the full tide of life and living it may not be expressed in words. Mrs. Elliott was gifted in many ways. With quick affectionate impulse she united keen perception and balanced judgment that made her service on social and philanthropic boards of distinct value. She was also a gifted musician and gave much pleasure to others in the exercise of her talent. In appearance she radiated health, and the sudden development of the malignant disease that carried her off so quickly was a distinct shock to all who knew her. Dr. Elliott has the sincere sympathy of the profession.

Book Reviews

Forty Notifiable Diseases—A simple discussion of the more important communicable diseases by Hiram Byrd, B.S., M.D., Director, Department of Hygiene, University of Alabama. Price 60 cents. World Book Company, Yonkerson-Hudson, N.Y. 1922.

This book about communicable diseases is a summary of

important facts that should be a part of the information possessed by every citizen. It sets forth only those aspects of the subject that a layman can reasonably be expected to assimilate, but at the same time includes all the facts and ideas that it is desirable for him to know.

The author is an experienced and practical worker who knows exactly where efforts should be directed to secure the maximum health return. He explains the facts in such simple form that even a junior high school student can master them, and those without a working knowledge of biology can gain a thorough grounding in the principal facts connected with communicable diseases.

Handbook of Electrotherapy for Practitioners and Students, by Burton Baker Grover, M.D. Illustrated with 103 engravings in the text and 6 plates of 12 charts. Philadelphia: The F. A. Davis Company, publishers, 1921. Price $4.00 net.

The author of this book has furnished the physician employing electricity as a therapeutic agent a simple and clear presentation of this branch of medicine. The section on treatment, which shows, in detail, how each disease should be handled, is very complete, and mastery of the facts contained in this manual should enable those so situated to do satisfactory electrotherapeutic work.

Cancer and its Non-Surgical Treatment, by L. Duncan Bulkley, A.M., M.D., Senior Physician to the New York Skin and Cancer Hospital; Member, American Association for Cancer Research. New York: William Wood & Co., 51 Fifth Avenue. Price $6.00 net.

The author of this volume is one of the outstanding authorities on this Continent on the subject of Cancer, and he is convinced that Cancer is the result of diathesis rather than being a purely local disease.

In this volume he discusses Cancer from a statistical, geographical and chemical stand-point, as well as from a clinical

stand-point, but throughout, the matter bears on his theory of the cancer diathesis and the relation of meat diet to Cancer. It is doubtful if the author proves his point, but the book will be found interesting even if nothing that is new upon the subject is found in its pages.

The Practice of Medicine, by A. A. Stevens, M.D., Professor of Applied Therapeutics, in the University of Pennsylvania; Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Illustrated. Philadelphia and London: The W. B. Saunders Company. The Canadian Agents: The J. F. Hartz Co., Limited, Toronto. Price $7.50 net. 1922.

The brief and modest Preface is well borne out by the book itself. The Table of Contents shows excellently how American Medicine, and for that matter most other things American, are broadening out under the influence of enforced contact with the wider world outside their hitherto narrow sphere; contact enforced by their own responsibilities in the Pacific and elsewhere, and by such episodes as the Great War. The bearing of a proper share of the White Man's Burden is in itself a liberal education. The work bears much resemblance, in scope and merit, to the text-book of the author's former master in the art, to whom he dedicated it, "Sir William Osler, Bart., M.D., F.R.S., Medical Philosopher, Master Clinician, Trusted Counselor." Such modern topics as Focal Infection, Peridental Septic Infection, and others of the kind, are briefly and effectively handled, and Tropical Diseases have due attention. A few slips in scholarship are to be regretted, e.g., *Verruga Peruviania* for *V. Peruviana,* in both Table of Contents, Index, and Article on the Subject.

The Writing of Medical Papers, by Maud H. Mellish, Editor of the Mayo Clinic Publications. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1922. Cloth, $1.50 net.

The author holds that they who have chosen medicine for a life-work should be able to write well. This volume will help writers partly trained to convey information with brevity, accuracy, clearness, and in accepted form. The writer of this note has read the book with pleasure and profit, and intends to make extended reference to it in a future number.

The Mechanism of the Brain and the Function of the Frontal Lobes, by Professor Leonardo Bianchi, Senator of the Kingdom of Italy. Authorized translation from the Italian, by James H. MacDonald, M.B., Ch.B., F.R.F.P.S., (Glasg.). With a foreword by C. Lloyd Morgan, LL.D., D.Sc., F.R.S., Edinburgh: E. & S. Livingstone. 1922. Price 21/ net.

This work is the outcome of a series of experimental investigations covering a period commencing in 1888, and continued to the time of writing. It is a very readable and interesting volume of 330 pages. The author takes up the evolution of the nervous system and cerebral localization, and reviews the doctrines concerning the functions of the frontal lobes. His methods of conducting his experiments have apparently been most careful, as such investigations are always liable to severe criticism. He relates at some length the clinical and experimental histories of dogs, foxes and monkeys. Besides the experimental aspects of the subject, the volume is devoted to general doctrines, and to an initial phase of anatomical psychology, the analysis of clinical cases being postponed for a subsequent work.

Manual of the Diseases of the Eye for Students and General Practitioners, by Charles H. May, M.D., Director and Visiting Surgeon, Eye Service, Bellevue Hospital, New York. Tenth edition, revised, with 377 original illustrations, including 22 plates, with 71 colored figures. New York: William Wood & Company. 1922. Price $3.50 net.

This concise, well illustrated little book needs no introduction to the profession as it has for over twenty years been recognized as one of the standard hand books on Diseases of the Eye. This, the tenth edition, is not materially changed but brings the subject matter up to date.

Diseases of the Stomach and Upper Alimentary Tract, by Anthony Bassler, M.D., F.A.C.P. Fifth edition, revised and enlarged. Illustrated with 151 half-tone and line text engravings and 93 full-page plates (with 164 figures) plain and in colors, from original photographs and drawings. Philadelphia: F. A. Davis Company, publishers. 1922. Price $8.00.

This book presents the latest advances in this department of medicine—with reference to secretion of gastric juice, motility, x-ray examination many excellent plates, fractional test-meal method of analysis, and practical advice on duodenal and rectal feedings. Dr. Bassler starts with anatomical studies of the upper tract, then discusses the physiology and chemistry of digestion. Then he takes up the examination of the patient and the history taking; study of gastric contents, feces, blood and urine. Then follows the therapeusis: medicinal, electric, mechano-physical-supports, exercise, hydro-pathic and the like. Surgical measures are then considered. The various diseases of the mouth and oseophagus are gone into. Then come the organic diseases of the stomach—their etiology, pathology, symptomatology and treatment. An informative chapter is devoted to splanchnoptosis. Stomach conditions in diseases of other organ comes next for consideration—of much interest. Chapter XXVIII is given over to nervous and endocrine disturbances of the stomach; XXIX, XXX and XXXI to functional disorders of that organ. The illustrations are excellent. The general practitioner should find this new edition of peculiar value in helping him to elucidate those cases he runs across so often and which are frequently baffling.

Overseas Visitors' Guide to London and the British Isles, by Alwyn Pride. All the guide books condensed into one, to tell you the best of most things—where to go—where to stay—where to buy and what to see. Forster Groom & Co., Limited, 15 Charing Cross, S. W. 1, London, England. Price 1/6.

This is a handy readable little pocket volume, just what a busy tourist will value, not only for reference as he travels, but to con over when he returns and wishes to recall the picturesque, ancient and modern, and only London.

Surgical and Mechanical Treatment of Peripheral Nerves, by Byron Stookey. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1922.

Since the begining of the war, several excellent books have been published on nerve surgery, which have done much to increase general surgical knowledge and to improve the treatment of lesions involving the peripheral nerves. These books have all been written by surgeons or neurologists whose interest had been recently aroused by the large number of patients admitted to Military Hospitals suffering from gunshot wounds of the nerves. Aside from presenting abundant clinical evidence of the results of the various operation procedures, however, evidence which it is often very difficult to analyze and to properly weigh, these books have done little to clear away the many difficulties which have obstructed the advance of this branch of surgery. In Stookey's new book, however, the problem is attacked in a much better way. This book is evidently the result of the combined work of a group of surgeons and neurologists appointed by the United States Army to investigate the subject both clinically and experimentally, all working under the supervision of Dr. Carl Huber, one of the most eminent experimental neurologists of the day. As a result of this arrangement, the clinical problems were all subjected immediately to

exhaustive experimental study and every theory which appeared to have clinical support was thoroughly tested in the most scientific manner. The outcome of the work has been a text-book which will long serve as a standard among surgeons who engage in this branch of study. It is easily the best which has, up to the present, appeared in English. In addition to an appreciation of quality of the text, a word of praise must be given to the general style adopted by the author and to the handsome way in which this book is illustrated. Nothing finer has appeared in a long time. This book will undoubtedly have a very large sale and can be highly recommended to all who are interested in the surgery of the nerves.

Syphilis and its Treatment, by Wilfred S. Fox. The W. B. Saunders Company, Toronto: The J. F. Hartz Co., Limited.

This very readable book is well got up, the various lesions are shewn in many very excellent illustrations.

The history and etiology of the disease are concisely described and there is an excellent short discussion on the interpretation of the Wasserman Test. The treatment used by the author, which is the usually accepted one, is clearly put. Other precautions are shortly discussed in a non-committal manner. In the chapter on Hereditary Syphilis, the arguments for paternal transmission are well sustained. The author shews clear thinking and good judgment in the chapter on Public Health. The book is very suitable for the general practitioner's library.

THE AMERICAN MEDICAL PRESS

A new publication, under the name of *The American Medical Press,* recently made its bow to the medical profession of this continent. We would like to take this opportunity of congratulating Dr. McMechan and his associ-

ates upon this publication. As stated in the announcement received from the publishers, *"The American Medical Press* is an Open Forum and a Digest of Current Events and Editorial Opinion to enable the Allied Professions to see the Problems and Responsibilities of their Citizenship and act accordingly."

Practical Psychology and Psychiatry, for use in training-schools for attendants and nurses and in medical classes, and as a ready reference for the practitioner, by C. B. Burr, M.D. Fifth edition, revised and enlarged, with illustrations. Philadelphia: F. A. Davis Co., publishers. 1921. Price $2.00.

This excellent little book begins with a chapter on psychology, which is a most timely introduction to a concise edition. The section devoted to the discussion of Insanity taken as a whole is divided into numerous subsections or chapters on individual conditions. The nomenclature followed is that of the National Committee for Mental Hygiene. The book ends in an excellent chapter on The Prevention of Insanity, which is immediately preceded by a chapter on the care of the insane.

The Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods (with notes on Salvarsan) by Reginald Hayes, M.R.C.S., etc. Fourth edition, revised. London: Hailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1922. Price 4/6 net.

Dr. Hayes well-known book dealing with the intensive treatment of Syphilis and its various sequelae, has appeared in its fourth edition. The book commends itself to the reviewer through its broad-minded dealing of the subject, and the careful analysis of the data which Dr. Hayes has collected through years of work in a large clinical field. While he im-

presses upon his readers the necessity of the employment of Salvarsan and other trustworthy arsenical products, he shows that the efficacy of the treatment is greatly added to by the inunction of mercury by skilled rubbers, and goes on to show that the inunction of mercury must be done scientifically rather than by haphazard methods if it is to be of any benefit.

The Principles of Hygiene—A practical Manual for Students, Physicians and Health-Officers, by D. H. Bergey, A.M., M.D., Dr. P. H., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Seventh edition, thoroughly revised. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co. Limited, Toronto. Price $6.00 net.

PRINCIPLES OF HYGIENE

D. H. Bergey.

This Seventh Edition is an improvement over the previous edition. Many sections of the book have been re-written. The introduction where the causes of disease have been enumerated is very good. Chapter I on Air would perhaps be better placed in a more advanced position in the book, but the subject matter is good and appears up-to-date. A considerable part of the book is devoted to Sanitary Engineering and Sanitation generally. In my opinion Chapter XVII (Vital Causes of Disease) should follow the introduction. There is practically nothing on Mental Hygiene or Venereal Disease, both very important public health subjects to-day.

The quarantine laws of the United States are not of particular interest to Canadians.

To sum up, the book is an improvement over previous editions, but not yet up to the standard of either Rosenau or Park.

R. R. McClenahan, M.D.

A MILLION DOLLAR ASYLUM FOR CRIMINAL INSANE

Establishment by the provincial government of a special asylum for the criminal insane was advocated by Dr. Camille Laviolette, expert alienist at the hospital of St. Jean de Dieu, in an address on "The internment of the criminal insane" delivered at the convention of French-speaking physicians of North America. Early in September, a resolution favoring the scheme was unanimously adopted by the convention.

The proposal gains added interest since it came from one of the expert alienists who testified as to the mental condition of the Rev. Adelard Delorme at his "sanity trial."

Alienists of the province are known to be solid in their approval of the scheme which Dr. Laviolette presented, and it is declared that part of the provincial ministry at least is sympathetic to the plan which, it is estimated, would mean an outlay of $1,000,000 by the government.

RAW MEAT JUICE IN ANOREXIA AND MALNUTRITION

(Carnine Lefrancq)

Raw meat juice, as is well known, exerts a powerfully stimulating effect on gastric secretion as well as on metabolism in general. Under its influence a gastric juice rich in free acid and pepsin is poured forth, the presence of which in the stomach creates a desire for food. In minor degrees this property possessed by all solutions of meat extractives, beef-tea for instance; indeed this is why we empirically put bouillon and consumme at the beginning of a meal. Raw meat juice, however, is something more than a solution of meat extractives; it is a quasi-living fluid containing all the natural ferments of

muscle plasma, so that its effects are by no means limited to mechanical stimulation of function. It is, in short, a vitalising tonic restoring the appetite and promoting digestion.

The administration of the juice of fresh raw beef (*Carnine Lefrancq*) is at once followed by a desire for food and enhanced ability to assimilate it as shown by the fact of a steady increase of body weight. Both directly and indirectly it enriches the blood, augmenting the number of red corpuscles and increasing the proportion of hæmogloblin and this without throwing any additional burden on the digestive apparatus, the activity whereof is markedly enhanced.

Carnine Lefrancq is rich in phosphorus and iron and is thus enabled to remedy the demineralisation of the tissues that accompanies chronic malnutrition and paves the way to consumptive diseases such as tuberculosis. Now loss of appetite is one of the earliest symptoms in tuberculosis, contributing to bring about the loss of weight premonitory of that infection. The so-called præ-tuberculous period indeed is characterized by two principal features: loss of appetite and tissues demineralisation and if these are properly treated the disquieting constitutional disturbance subsides and the attack may be averted. This is one aspect of the well-known curative effect of raw meat and raw meat juice in tuberculosis, though far more important is the specific action of raw muscle plasma in this respect. In fact it seems to introduce an immunising agent of some sort which enables the human organism to combat and resist the invading bacillus.

Carnine Lefrancq can be obtained through The Canadian Depat, Rougier Freres, 210 Lemoine St., Montreal.

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CONTENTS

EDITORIAL

Page

The Writing of Medical Papers..... 155
The Chronic Appendix..... 158
Are University of Toronto appointments in accordance with The Hospital Act? 160

ORIGINAL CONTRIBUTION

A Physiological Adjuvant in The Rest Cure of Pulmonary Tuberculosis,.....S. A. Knopf, M.D..... 163
Canadian Oto-Laryngology (Continued) D. J. Gibb Wishart M.D.....176

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Editorial

The Writing of Medical Papers

In a little book reviewed in these columns there are some excellent hints for those who would undertake the craft of writing medical papers. For the benefit of such as well as for the information of our other readers, we select a few kernels.

In the chapter on "Usage," the author's summary is:—

Choose words already approved and in use.

Hesitate to give new meanings to old words.

Do not invent words.

Use only English words and phrases.

As to vocabulary, she (the author is a woman) enjoins us to,

(1) Acquire a large and varied vocabulary from which to select the most fitting words.

(2) Refrain from repeating a word or phrase needlessly, although the repetition is preferable to awkward avoidance of it.

(3) Thoroughly investigate the meaning of unfamiliar words before using them.

(4) Use words accurately.

(5) Discard irrelevant and needless words.

(6) Avoid crystallized phrases.

Respecting italics, she advises us not to use them for emphasis. They should be used for subheads in manuscripts, for figures and letters subdividing paragraphs or sentences, and the like. Foreign words should be italicized until their frequent use results in their adoption into English. When the writer wishes italics to be used he should underscore the word or words with a single line.

Speaking of abbreviations, she says: Use standard abbreviations only; but use them sparingly and consistently. When necessary, abbreviate statistical data in charts, tables, and so forth. Pages containing tabulated matter should not be folded. Such material for lantern slides should be arranged within a prescribed limit proportional to the dimensions of the slide. Superior figures in the text should be used to indicate footnotes.

General rules are to be followed in capitalizing.

Her advice as to punctuation is that it should be studied thoroughly;—the art cannot be learned from a few rules. Punctuation marks should be used to show the relation between groups of words. When in doubt marks should be placed guardedly, using only such as are clearly indicated.

The chapter on "Miscellaneous Grammatical Notes" is so pithy we cannot summarize it satisfactorily. One outstanding sentence reads thus:

Scientific writers are too apt to suppose that restatement in bigger words is explanation. One of the good rules is: Place the adverbs *only, merely, just, ever, hardly, scarcely, quite,* and *nearly* next to the words they modify and not elsewhere. In this chapter are several pages devoted to "Pitfalls in Diction." *Retire* for *go to bed* is affected. *Enthuse* is not yet sanctioned. *Researcher* is a vulgarism of the worst sort. *Panacea* is ludicrously used to mean an effective remedy for a single disease; it means something that will cure all diseases. *Promise* in the sense of *assure* is slang. *Like* must never be used in the sense of *as.* *Apt* should never be used in place of *liable* or *likely.* It means skilled or capable. We question whether the author has used this word properly in the sentence a dozen lines above.

Then follows a chapter on "Don'ts." The closing paragraph recommends us to form the habit of using correct words. The reader should not be obliged to guess one's meaning. "Study the style of your paper quite as carefully as the subject matter. The hackneyed excuse for bad English, 'individual style,' will not be accepted by conscientious editors."

Under "Subject Matter and Length of Papers," the author concludes:

Avoid miscellaneous topics.

Choose a subject, (1) of which original study has been made, and, (2) on which further investigations may be made.

Give a brief summary of personal observations on the topic previously published.

Review literature briefly.

Make papers brief and clear.

Present to an audience only abstracts of long papers.

Publish long papers serially.

The Chronic Appendix

C. Hamilton Whiteford in a recent number of the *Practitioner* discusses this subject. The symptoms usually ascribed are pain and tenderness in the right iliac fossa, the other signs of acute inflammation being absent; gastro-intestinal disturbances which do not conform to any known type of disease; symptoms resembling those of gall-stones or gastric and duodenal ulcer; a history of previous attacks of acute appendicitis.

The essayist explains how the above symptoms severally may occur without there being chronic appendix trouble.

He cites cases in point: (1) To show the futility of removing the appendix for symptoms of disease in other organs, and the slender microscopical evidence on which the appendix may be condemned; (2) One in which a small thin appendix, three and one-half inches in length, containing some fœcal lumps and some translucent material, with a meso-appendix to the tip and no dilated blood vessels on the surface. The inner surface of the mucous membrane was intact, but there were several small areas of congestion apparently in the sub-mucous tissue; (3) Young nurse (never laid up for attacks) had her appendix removed on the pathology of which

no record was made; a second operation was done for pain attributed to adhesions, and a third for removal of a part of the colon. Result: a neurasthenic wreck. (4) Cutaneous hyperaesthesia, diagnosed as appendicitis.

Whiteford concludes thus:—"(1) The enormous number of patients whose abdominal ailments are now diagnosed as chronic appendicitis, chiefly consists of cases, with symptoms of widely-varying causation, and for which symptoms the appendix is not responsible.

"(2) The symptoms attributed to the chronic appendix are not explained by the pathological findings and are not cured by removal of the appendix.

"(3) The operation for removal of the appendix not only fails to cure, but often makes the patient worse.

"(4) Attribution to the appendix of abdominal discomforts of obscure origin hinders investigation into the causes of abdominal pain.

"(5) In the surgeon, the chronic appendix theory produces laxity in diagnosis and, in operating, incisions are so small that thorough examination of the abdominal contents is made a mechanical impossibility.

(6) In the laymen, the operation for removal of the chronic appendix, because of its failure to cure and because of its after-effects, is producing doubt about the necessity for operation in acute appendicitis and mistrust in the *bonâ fides* of the surgeon.

(7) The chronic appendix theory, judged by the test of the ability of the operation for the removal

of the appendix to rid the patient of his symptoms, is found wanting.

(8) In the interest of surgeons and patients the diagnosis of chronic inflammation of the appendix as a condition requiring operation should be at an end.

Are Toronto University Appointments in Accordance with the Hospital Act?

The Parliamentary Committee in the relations of the University of Toronto and the Toronto General Hospital, when it meets, will have some interesting questions to deal with.

We are not concerned with the differences between the parties to the dispute, but the Profession would like to see the matter threshed out publicly. To us it seems that the great question to be decided is, who shall make the appointments. At present the appointments are made on the nomination of the President of the University, presumably on the advice of his Heads of Departments. These nominations are then confirmed by a Joint Relations Committee of the University Trustees and the Hospital Board. If they fail to agree the matter can, by the Hospitals Act, be referred to the Governor in Council to decide. The Hospital Trustees object to being merely rubber stamps.

Behind all this lies the question, complicated by the necessity of providing medical teaching, who is the best judge of the qualifications of a member of the Medical Staff?

Are the members of the Board—laymen all—qualified to decide such a question? Do they wish to be bothered with the representations and claims of every ambitious tyro? Are they desirous that the Staff should be made up of their respective family practitioners, or of their wives' relations? Have they designs, concealed to themselves it may be, of controlling appointments to the University Professoriate, and terminating such University appointments by terminating hospital appointments?

Are they even now living up to the requirements of the Hospital Act, or are they in any way influenced by financial or personal considerations?

On the other hand, does the President of the University or his advisers know anything about the qualifications of their nominees? Has he, or have they, any special opportunities for judging of the probable development of the nominees?

Is the head of a department responsible for it? If he is, is he also to be a rubber stamp and have foisted upon him, by reason of the say-so of either Hospital Board, University President, or Heads of other medical departments, a man whom he regards as undesirable?

Are there any qualifications other than ability to be considered? Is a man admittedly able, but constantly keeping things in a turmoil and unable to get on amicably with his associates, a desirable man for the Staff?

That is the question the medical profession wish answered, and answered now.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

A PHYSIOLOGICAL ADJUVANT IN THE REST CURE OF PULMONARY TUBERCULOSIS*

S. Adolphus Knopf, M.D. (New York and Paris),

Attending Specialist U.S. Veterans' Hospital No. 61, New York.

Ever since Dettweiler[1] devised the rest cure on a reclining chair in the open air, as a means of accomplishing a cure in pulmonary tuberculosis, the idea of exercise in the open air as a therapeutic measure has been abandoned by the majority of physicians. In later years various clinicians, and in this country especially the late Charles Denison,[2] Norman Bridge[3] and Henry Sewall[4] have endeavored to add to the general rest the local restriction of the respiratory movements. This method was tried first with simple adhesive strips encircling the chest. In a very interesting recent contribution on this subject by Sewell and Swezey[4], an ingenious belt is described whereby the respiratory excursions are limited. According to these authors the results were surprisingly satisfactory in view of the fact that the patients who underwent the treatment were in the advanced stages of the disease and had been refractory to the usual modes of treatment.

Of course, this attempt to restrict the respiratory movements in order to give local rest to the lung, cannot be com-

*Read before the Clinical Section of the National Tuberculosis Association, at its meeting in Washington, May 4, 1922; and presented in French before Le Congrès des Médecins de Langue Française de l'Amérique du Nord, Montreal, September 8, 1922.

pared with the results obtained by successful artificial pneumothorax where the involved lung is completely collapsed and, so to speak, put out of commission. Of the results of artificial pneumothorax, particularly in the early cases, and far-advanced stages of the disease, so much has been written that it would encroach too much upon the time of the reader to try to give any statistics. We all know that there is a vast difference of opinion concerning the utility of artificial pneumothorax, particularly in the early cases, and we know also that, owing to pleuritic adhesions, the number of advanced cases of pulmonary tuberculosis suitable for this operation has thus far been limited.

The latest achievements of Prof. H. C. Jacobaeus of Stockholm[5] who, with the aid of the thoracoscope and a long cautery protected by a cannula, divides the pleuritic adhesions, may help to diminish the number of cases which have heretofore been considered as unsuited for artificial pneumothorax. Some French experimenters even resorted to the bistoury, properly protected, to sever the adhesions. Thoracoplastic operations may also, perhaps, be more frequently resorted to hereafter for the same purpose, as the operation becomes better perfected. Of course, the two latter procedures must always be considered more or less dangerous. In dividing the pleuritic bands with the bistoury, or even with the electric cautery, there will always be some danger of coming across very vascular adhesions, or such extensive ones that there may be danger of hemorrhage and rupturing the lung. The thoracopneumoplastic operation so far has yielded a rather high mortality, even at the hands of so skillful a surgeon as Archibald[6], so that it must be restricted to very few cases.

All the procedures just described, however, have one sole object in view, namely, to limit or to restrict entirely the respiratory movements of the diseased lung. From observing animal life and from the study of comparative physiology[7], the thought has come to me that the slow-breathing animal seems to be the longest lived. The rabbit, which is the most susceptible to tuberculosis, particularly the bovine type, breathes 55 times a minute; the adult guinea pig 80 times; the young guinea pig 140 times a minute. It is well known that the guinea pig is very susceptible to both types

of tuberculosis. The horse which, of all the domestic animals, is the least susceptible to tuberculosis, breathes only ten times a minute when at rest. The cow, on the other hand, contracting tuberculosis more readily, breathes fifteen to thirty times per minute. The animal which perhaps lives longest is the turtle whose respirations are so few per minute that they are hardly perceptible.

Now, if according to the foregoing, the slowly breathing animal is least susceptible to the invasion of tuberculosis, and a lung infected by tuberculosis is benefited by restriction of its respiratory movements through outside pressure, or by the complete arrest of function by means of an air splint (artificial pneumothorax) or bone compression, why should not restricted respiratory movements and reduction in their number by voluntary effort be equally valuable as an adjuvant in the cure of pulmonary tuberculosis?

I first experimented on myself, and have been able to reduce my respirations, by resorting to diaphragmatic breathing, without discomfort, to eight, six, and sometimes five per minute. I recommended this to a few of my patients in various stages of the disease and I was surprised to find how well they could train themselves to reduce their respiratory movements from twenty-four and thirty per minute to ten, eight, and six, and to do this gradually for half an hour to one hour at a time several times a day.

As far as I had gone, the patients did not experience any discomfort from these exercises, but felt better, and their general condition as well as their local lesions improved markedly. One patient confessed to me that after restricting the number of his respiratory movements, he experienced an intense desire to take a deep breath. Having been instructed not to do so, he imagined himself to feel very uncomfortable. I told him that the next time he felt like taking a deep inspiration, he should not hesitate to follow his inclination. A few days later he assured me that the thought that he could take a deep breath when he wanted to, made him feel much more comfortable and that he could keep up his restricted breathing for a longer time. Although I knew from my clinical experience that patients can live and breathe when there is virtually only one-fourth or even less of lung area in condition to attend to the oxygenation necessary for life, I did not feel certain about

the wisdom of my procedure as a therapeutic means. I feared that perhaps through this method of producing physiological rest, I might in the long run do harm to my patients by allowing an accumulation of carbon dioxide and a privation of oxygen. According to Weber[8] and his followers, it would seem that a moderate acumulation of carbon dioxide is not by any means to be feared, but rather to be favored in pulmonary tuberculosis. Nevertheless, to be on the safe side, I consulted Dr. Graham Lusk, Professor of Physiology of Cornell University Medical College, and demonstrated for him this method of breathing, and to his surprise I was able to reduce my respirations to four per minute. He told me that in his opinion no possible harm could be done to any one by using superficial respiration, restricting the number of respirations per minute or diaphragmatic breathing. Wishing to have something authentic on the subject, I asked him to be good enough to write me his opinion, with permission to use it in this article, and he most kindly wrote me as follows:

"Under ordinary conditions the production of carbon dioxide in the tissues controls the volume of the respiration. If the number of respirations per minute be decreased, the volume of air expired and inspired is automatically increased. The total gaseous exchange, however, remains approximately the same. Under ordinary conditions of rest the quantity of oxygen absorbed is almost the same whether there be seven or fifteen respirations per minute."

The statement by Professor Lusk concerning the automatic increase of the volume of air expired and inspired per breath, I have not only been able to verify by interesting experiments, but to my surprise I found that the volume of air inspired and expired when the respiration is limited to the basal portions of the lungs, that is to say, the volume of tidal air, is even materially increased above the normal. Through the courtesy of Professor Lusk and with the valuable co-operation of Dr. D. P. Barr, of the Russell Sage Institute of Pathology, I was permitted to make some spirometric tests during the respirations restricted in number and limited to the diaphragmatic mode of breathing. Dr. Barr kindly lent himself to the experiment. After I had demonstrated to him how he could diminish the number of respirations to five per minute and limit them to the basal portion of the lungs, he was surprised to find

with what comfort he could do it, and thought he could do it indefinitely. Dr. Barr has an unusually well developed chest and in ordinary respiration his tidal volume is 600 cc. per respiration. We both observed with interest that the volume of tidal air approximately doubled while he was lying in a recumbent position, breathing through the tube of the spirometer. We repeated the experiment twice, each time lasting for three minutes, and the average number of respirations did not exceed five per minute. Dr. Barr assured me that throughout the three periods of experimentation his respiration was comfortable and adequate, yet the upper portion of his lungs was virtually at rest.

It is of course possible, when one limits his respiratory function voluntarily, that there is an unconscious effort to take in more air than is actually needed. But this experiment proves that no harm can possibly be done by restricted respiration, and that a more thorough ventilation of the usually non-affected basal parts of the lungs in tuberculous patients can only be beneficial.

Besides the chemical stimulus to the continuance of respiration, there exists also a nervous stimulus, to which MacLeod[9] refers in his article on "Some Recent Work on the Control of the Respiratory Centres." He says: "There are in general two ways in which the activities of a centre might be caused to alter. These are by changes in the chemical composition of the blood supplying it and by nerve impulses derived from other parts of the nervous system." In other words, the respiratory movements can, in no small degree, be controlled by the will. Norman Bridge, as far back as 1908, wrote concerning this as follows:

"Patients with active tuberculosis, who have been coughing much and been taking exercises of deep breathing, usually rather promptly discover an improvement in their sense of comfort and strength, as well as a perceptible decrease in fever, after they have adopted the plan of lessening the cough and keeping the lung as still as possible by will power measures."

Maurice Bourgois[10], in his thesis on "Maximum d'apnee voluntaire," describes the method of choosing the type of men for aviators, which revealed the astounding fact that some men could remain as long as sixty-five seconds without breathing,

merely by will power. While not exactly germane to the subject, it is interesting to note that those who could suspend their respiration from fifty to sixty-five seconds, were considered especially fitted. Those who could hold their breath for forty to forty-five were admitted, while those who could retain their respirations for only fifteen to twenty seconds were rejected. These examinations certainly show the great power which the mind can exert over the respiratory function.

The reason for the improvement in my patients, and particularly in those who faithfully carried out my instructions concerning diminution of respiratory movements, I believe to be the relative rest which had been given to the lung by this process.

There is also a possibility, if this restricted breathing should really allow a little more of the carbon dioxide, but not enough in quantity to be harmful, to remain in the system in the nonventilated portion of the lungs, that this too may have had a beneficial effect. Corper, Gauss, and Rensch, in their admirable experimental work[11], have substantiated Weber's belief that a deficiency of carbon dioxide in the body favors tuberculosis, while an accumulation retards its progress. They, however, thoroughly disagree with Weber's treatment of advanced cases of tuberculosis, which consists in giving sodium bicarbonate and hydrochloric acid by mouth, with feedings of levulose combined in severe cases with subcutaneous injections of liquid paraffine (10 grams twice daily). Corper and his colleagues very justly say that paraffine oil cannot produce carbon dioxide in the metabolism of the body. Personally, I believe that even if we should ever succeed in introducing carbon dioxide into the system by medication or nutrition, its dosage would prove as difficult as it would be dangerous.

I am not going to burden this paper with calculations concerning how many hours during the day some of my patients succeeded in doing diaphragmatic breathing and in reducing their respirations. Suffice it to say, that if one succeeded in reducing his respiration from twenty per minute to ten, he has spared his lung 3,000 movements in five hours. Even if it seems difficult for the patient to reduce the number of respiratory movements for any appreciable time, he will derive considerable benefit from shallow respiration or limiting his respiration to the basal portion of the lung. This part of the

procedure, intended to obtain local rest for the invaded upper portion of the pulmonary area, is with some patients relatively easier to carry out than the voluntary reduction of the number of respirations per minute.

Of course, when one palpates the anterior portion of the chest carefully over the upper lobes, one may perceive a slight movement, particularly in beginners, but this diminishes as the patient becomes more habituated to diaphragmatic breathing. I question whether there exists any method of obtaining absolute rest for any part of the lung except by a successful artificial pneumothorax operation. No matter how perfect the methods of external application of compressing the lung by adhesive plaster or belt may seem, it is anatomically and physiologically impossible to compress the bony frame of the thorax to the extent of procuring absolute immobility of the underlying organs.

This fact no doubt inspired Webb and his co-workers, Forster and Houck[12] to investigate the value of simple posture in the treatment of pulmonary tuberculosis. These observers found that patients who slept or rested during the day on the side of their diseased lung did a great deal better than those who slept on the opposite or well side. To add this treatment by posture, particularly during sleep, to the respiratory method described in this paper, can of course only be of additional advantage.

In this communication I shall not only refrain from entering into the details of my cases, but will also avoid all statistics of cure, half-cure, arrest, improvement, or failure. I shall, however, refer to the results obtained in a few cases in the advanced stages with cavitation in my service at Fox Hills and in private practice. The patients had the usual symptoms of toxin absorption. After practising this method of breathing for a couple of weeks, cough, expectoration, and temperature gradually, but perceptibly diminished, and auscultation revealed a decided tendency to fibrous repair. But a few cases and the observations of one man alone in the treatment of tuberculosis cannot and should never be considered conclusive. All I will venture to do, therefore, is to give my ideas on the subject, describe the modus operandi and ask my fellow practitioners to try it on as large a scale as possible in early, moderately advanced, and even far advanced cases, and after

a thorough trial send me their reports. That the results will be best in the early cases must be evident. That the results must be better when the general rest treatment in the open air and the proper hygienic, dietetic, and symptomatic treatment are carried out at the same time, than if the diminution of the respiratory movement is the sole remedy resorted to, is also obvious.

At the beginning of the treatment the patient lies on his reclining chair or preferably in bed with his head low. Later on, he may be able to resort to this method of breathing in the proper sitting or even standing position. The intelligent co-operation of the patient can only be obtained by explaining to him at length the object and aim of the procedure. He may be told that it may take some time before he can perceive any improvement, but that it can in no wise be injurious to him, and that should he have the slightest discomfort he should merely stop it. He must be furthermore assured that it cannot bring on a hemorrhage, although a hemoptysis may occur, as it does in all sorts of treatment, but that it is more likely to prevent one. When one occurs, the quiet and diminished respiratory movements will rather help in the coagulation of the blood and in the arrest of hemorrhage because of the effect of diminishing the movements of the bleeding lung.

Two patients of mine who had bloody expectoration and who stated that it always lasted many days, assured me that this quiet and diminished breathing shortened the usual duration of their blood spitting quite considerably. Of course, we all know that a hemorrhage or bloody expectoration may stop without any medication or other therapeutic means; general rest alone often suffices. Nevertheless, it is quite logical to assume that under the circumstances the respiratory movements are being diminished in number and the respiration restricted to the lower portion of the lungs, rarely invaded by tuberculosis, may have an additional beneficial influence on the arrest of hemoptysis. Except shortly after hemorrhage, or as long as the patient still has sanguineous expectoration, he should be encouraged to drink plenty of pure water, preferably slightly alkaline, at least eight tumblerfuls per day between mealtimes. I noticed that those of my patients who obeyed this order were better able to reduce their respirations, and do it for a longer time, than those who were neglectful in carrying out instructions to drink water.

Modus operandi: The patient should be told to imagine that the respiratory movement begins in the toes of his right foot, the inhalation gradually travelling upward as far as the diaphragm on the right side and then again over to the left side, and then gradually descends during expiration downward to the left, while, of course, this breathing from the toes upward and as far as the abdomen is merely imaginary, it results in a diaphragmatic breathing and whatever quantity of air is inhaled passes mainly through the lower portions of the lungs, while the upper portion of the lungs, where tuberculous lesions are usually located, are put at comparative rest.

To be sure that the patient understands exactly what is meant by diaphragmatic breathing, it is well to teach it in the following manner: Place the patient in a sitting or half-reclining position, with his feet extended and slightly separated. Then tell him to inhale as slowly as the physician's hand with index finger pointing moves in the upward direction, beginning at the toes on the right foot, crossing the abdomen to the left, then stopping two, three, four, or five seconds and then exhaling while the hand moves in the downward direction to the left foot. The physician or nurse teaching this breathing should repeat this procedure a few times until the patient fully grasps what he is asked to do and does it correctly. To this end it is well for the physician, while indicating the direction and duration of the inhalation with one hand, to place the other over the upper portions of the lung and thus observe whether they are at complete or at least at relative rest. When the patient is lying in the complete recumbent position with head slightly elevated, the diaphragmatic breathing will be materially aided by placing a very small pillow or a folded bath towel under the small of the back.

Sometimes a belt or bandage, pinned or buckled so that it can be easily removed, if the patient experiences a feeling of suffocation, may be put around the upper portion of the thorax to help in teaching how to limit breathing to the lower lobes. In support of the statement that the breathing can thus be virtually limited to the basal portion of the lungs, I will quote from the above mentioned article by Sewall and Swezey as follows:

"When respiratory movement is limited to the diaphragm it is the very bases of the lungs that move most widely, the extent of motion rapidly diminishing upwards. When the upper

chest expands, respiratory motion involves the upper lobes in proportion to the excursion of the overlying ribs. Now, it is familiar enough that, broadly speaking, pulmonary tuberculosis is a disease of the upper part of the lungs, its intensity being concentrated between the hilum and the extreme apex. Remembering the data of our argument, the deduction is obvious that were we able to inhibit respiratory motion in, say, the first four ribs, we could, without seriously impairing the vital capacity of the chest, so restrict the motion of the principal areas of pulmonary disease that distribution of the toxins therefrom would be greatly reduced."

Retaining the freshly inhaled air for a few seconds, which is by no means harmful and can easily be done by most patients, will further lessen the number of respirations per minute. When one considers that by this method of breathing not only the lungs, but the heart also is spared many a movement and energy thus preserved to a considerable extent, its value must be obvious. Lawson Brown,[13] in his admirable "Rules for Recovery in Pulmonary Tuberculosis," has laid very great emphasis on cardiac rest in pulmonary tuberculosis. If, as he says, with each normal heart beat an energy equal to four foot-pounds is exerted, and by reduced and restricted breathing we save the heart only two or three contractions per minute by this method of respiration, we spare the heart from 2,400 to 3,600 foot-pounds of energy in five hours.

Lastly, diaphragmatic breathing will also cause a better circulation in the lower extremities and abdominal viscera, especially aiding the hepatic function, all of which is so essential for patients who are ordered complete physical rest on a reclining chair or bed.

I have been asked whether women who, for biological reasons, do not use the diaphragm in breathing as much as men do, can adopt this physiological adjuvant. Whether or not it is because of the abandonment of tightly laced corsets that I have had no difficulty in this respect, I do not know. At any rate, I have also the assurance of Prof. Joel E. Goldthwait, of Boston, who has had such a large experience with cases in which he prescribes diaphragmatic breathing in order to correct faulty conditions due to postural or typical orthopedic deformities in women, that he has no difficulty whatsoever in making his female patients use diaphragmatic breathing.

It may also be asked whether there are any contraindications to this type of breathing. If pain is caused by the diaphragmatic breathing or, if present, is accentuated thereby, it is a decided contraindication. The pain may be due to adhesions between diaphragm and pleura on the affected side, to an acute pleurisy elsewhere, or to an intestinal or peritoneal involvement. A further contraindication is that exceedingly rare condition in which the primary involvement begins in the lower lobes, or where the process has extended to that region in the terminal stage. Lastly, should cough be increased by this procedure, whether it can be explained or not, it should be considered a contraindication. The same holds good when an emphysematous condition causes additional discomfort.

The most satisfactory results from this physiological adjuvant to the rest cure in pulmonary tuberculosis can naturally be obtained in a sanitorium or hospital where the patients have come, so to speak, to occupy themselves with getting well. In a closed institution the tuberculous patient very often becomes depressed because of lack of employment and wishes he had something to do. With watch in hand, or clock before him, he can occupy his time and help toward the cure by limiting his respiratory movements and giving rest to his lungs that they may have a chance to heal. However, satisfactory results can also be obtained in private practice. Here we have, more than anywhere else, the factors of personal equation. The family physician, having the absolute confidence of his patient and knowing his peculiarities and state of mind, can often accomplish a good deal more where the psychic and nervous elements are involved than the institution physician. I have had private patients who became intensely interested in this procedure, and they were rewarded for their efforts by a gradual diminution of distressing cough, fever, and pleuritic pains. The more confidence and peace of mind and the more quiet and rest of body we can give the patient suffering with pulmonary tuberculosis, the greater will be our success.

Every student of tuberculosis knows that could he put to complete general rest every case of early tuberculosis, slightly febrile or afebrile, and also limit completely or, if that is impossible, at least partially, the movements of the involved area, we would have considerably fewer advanced cases. In my early career I taught respiratory exercises as a prophylactic

measure in tuberculosis and I do so still; but as a curative means, after observing the results obtained with artificial pneumothorax, I feel more than ever that anything which will put the inflamed lung, invaded by the tubercle bacillus, at rest, or even at comparative rest, is the ideal treatment.

For reasons above stated, I do not believe that artificial pneumothorax can be resorted to in all moderately advanced cases; still less do I believe that Jacobaeus's procedure or the thoracopneumoplastic operation will be frequently resorted to. Whether every early case of tuberculosis can or should be subjected to the treatment of artificial pneumothorax is still, as already stated, an open question, and the reason for this is perhaps that the results have not been as satisfactory as hoped for and that at times they were followed by unpleasant complications. But be that as it may, this simple physiological adjuvant can be resorted to without any risk whatsoever in both the early and later stages of the disease. When, in addition to the restricted respiratory movements, the patient trains himself to cough only when the accumulation of pulmonary or bronchial secretion demands it, he will be doubly benefited.

Dr. John W. Turner, the consultant in tuberculosis of the United States Veterans' Bureau, before whom I demonstrated the restricted and diaphragmatic breathing, agreed with me that this method would not only secure local rest to the lungs, but also serve as an inspiration to the patient and give him something specific to do during his rest in bed or on the reclining chair while taking the cure.

Another colleague of mine in the United States Public Health Service, Dr. Nathan Barlow, said he felt convinced that this type of breathing would be conducive to quiet and serenity; psychic conditions most desirable in the rest cure of tuberculosis, but as a rule absent in the average patient.

Lastly, I submitted the paper in its present form to Dr. Lawrason Brown, one of the best known authorities on clinical tuberculosis in this country, who has been associated with the Trudeau Sanatorium for many years and a teacher at the Trudeau School since its establishment. In his reply he says: "I have read your article with a great deal of interest. I think it is an excellent idea and I shall put it into practice."

Besides this letter from Dr. Brown, of Saranac Lake, and

another equally encouraging one from Dr. Julius Cone of the same town, I have since come in possession of very gratifying comments from many leading physicians in this country and abroad, all urging a most thorough tryout of this physiological adjuvant. Among the gentlemen who thus honored me, I wish to mention Drs. Frank Billings, of Chicago, J. O. Cobb, of the United States Public Health Service, Crile of Cleveland, Goldthwait and Otis, of Boston, Krause, of Baltimore, Minor, of Asheville, Beverley Robinson, Neff and Stella, of New York, Osborne, of New Haven, Pattison of the National Tuberculosis Association, Dubé, Grenier and Le Sage, of Montreal, Young, of Toronto, Morton, Editor of The Tubercle, of London, England, Prof. Tuffier of Paris, and Prof. Rabinowitsch, Editor of the Zeitschrift für Tuberkulose, of Berlin.

And now may I hope that my humble suggestion to you concerning this adjuvant will encourage you to give it a thorough trial and make it as widely known as possible. It is my firm belief that it is bound to do some good in the combat of tuberculosis and the more widely it will be used the greater will be its benefit.

This is the hundredth anniversary of the birth of the immortal Pasteur and in connection with our antituberculosis work in its medical as well as its social aspects, we may well recall the Master's unforgetable injunction to his pupils and disciples "En fait du bien à répandre, le devoir ne cesse que là où le pouvoir manque." (In doing good the duty ceases only when the power fails).

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CANADIAN OTO-LARYNGOLOGY*

Dr. D. J. Gibb Wishart, Professor of Oto-Laryngology, University of Toronto.

(Continued from the October Issue.)

AMERICA.

We have at the moment two suggested plans for standardizing the study of the specialty:—

First. Recommendations[17] issued in 1920, by the Joint Committee representing all the special societies in Oto-Laryngology of the United States and Canada.

1. (Preliminary). The candidate must recognize that it is impossible to diagnose and treat a patient with an affection of the ear, nose, or throat, skillfully, without a sound knowledge of general medicine, and to that end should either have practised as a licensed practitioner, for four years, or have acted as an interne, in a class A, General Hospital, for at least one year.
2. The candidate who possesses the above qualifications should then proceed to prepare himself for the study of the specialty by pursuing, in the Post Graduate Department of a University, the following course of study, namely:—
 a. Anatomy of the head, neck and chest embryology and histology 100 credit hours.

* Read at the Ontario Medical Association, June 31st, 1922.

b. Pathology and Bacteriology 100 credit hours.
c. Operative work upon the cadaver 100 credit hours.
d. Physics 32 credit hours.
e. Physiology 30 credit hours.
f. Neurology 20 credit hours.
g. Hygiene and Public Health 10 credit hours.
h. Reading off radiographic plates.
i. Knowledge of the teeth, mouth and their diseases.
j. General Surgical Technique.

All of the above, except the last, are to be considered from the view-point of their bearing on the Oto-Laryngologist, and the direction as to the method by which this is to be arrived at must be derived from the Professor in charge of the department concerned, in the University selected.

The above course should occupy the candidate from four to five hours daily for a period of 6 to 9 months, and he is advised to spend the remaining portion of each day in attendance upon an out-patient clinic in Oto-Laryngology.

3. Subsequent to the completion of the above course, the candidate should secure a position as interne in a hospital especially devoted to diseases of the ear, nose, and throat, or in a general hospital possessing an adequate Oto-Laryngological service. The period occupied in this portion of his training will vary, but should not be less than 9 months.

The candidate must recognize that the above course is only a minimum, and that if he desires to rank as a first-class specialist he must further pursue special study, either on this continent or abroad, in centres where opportunity is afforded to follow the work of those devoting their time to certain special fields in Oto-Laryngology.

The Committee hope to be able to assist the candidate in the following ways:—

1. Securing from the Post Graduate Department of the Universities a suitable degree, to be conferred only upon such candidates as have followed the above course.
2. By correspondence with the Post Graduate Departments of the Universities, with a view to securing a uniformity in the course of study to be pursued under the various heads of No. 2.

3. By arranging with the hospitals referred to above to limit their appointments, as internes, to those candidates possessing qualifications as outlined under 1 and 2.
4. By preparing a list of hospitals to which candidates may safely be recommended to apply for the position of interne.
5. By securing reliable information as to the facilities offered by various centres, which they may place at the disposal of those who desire to perfect themselves still further in any Department in Oto-Laryngology, after the above course has been completed.

Second Recommendations[18] of the Committee on Graduate Instruction of the American Medical Association.

1. We recommend that students preparing for the practise of Oto-Laryngology be graduates of Class A medical schools and have completed a year's service as interne in an approved general hospital.
2. We recommend that when possible the preparation for special practice be started immediately after completion of this hospital year. We do not approve of specialization beginning during the undergraduate course.
3. We recommend that the minimum training consist of 18 months' full time work, the first year to be spent in one place. The last six months may be continued here or the work may be pursued in other approved centres. The work pursued during the first year should include a half of each day devoted to the clinical study of cases, the other half day to the study of the fundamental sciences and to library work.
4. All of this work must be on the basis of genuine graduate instruction in which the student does his work individually under proper supervision.
5. The work in the fundamental sciences should be done in properly equipped laboratories such as exist in all class A medical schools. The clinical work must be done in a properly equipped and properly organized

out-patient department of either a class A medical school or a special hospital, the student serving as a clinical assistant.

6. On the completion of the first year's fundamental training the student is advised to secure as far as this is possible, the position of interne in a special hospital or of resident in Oto-Laryngology in a general hospital.
7. For those students who are not able to secure suitable hospital positions after the completion of the first year's fundamental training, the remaining six months work necessary to fill out the 18 months' minimum requirement may be taken as continuation of the first year's work in the same institution or by taking special work in other centres. Others may devote the last six months to serving as assistant in the practise of some established specialists. When the latter alternatives are followed the work selected must meet the approval of the institution in which the first year's work has been taken.
8. We recommend that on the completion of the above requirements the student be granted a suitable certificate setting forth that he has had the proper preparation for taking up the practice of the specialty. This certificate is to be granted by the institution in which the first year's work has been taken. We feel satisfied that such degrees will be granted as readily by the University to those students preparing for the practice of Oto-Laryngology as to the students in any other field, whenever the work pursued meets the requirements established for the granting of such degree.
9. We recommend the perfecting of existing post-graduate courses, clinics, etc., as review work for those established in special practise as well as for those who have completed the first year in fundamental training outlined above.

Whatever the facts are as to priority in the establishment of chairs in this specialty, Mackenzie was able to state, in 1901, that "the place of laryngology in university study has been grossly neglected in America and Europe. Even when it is indicated in the calendar it is a mere poetical abstraction, altogether baseless and impractical."

In 1907, Shambaugh[20] wrote an article upon the "Preparation of the Specialist," in which he took the ground that "the need of special training for the men entering a medical specialty is as urgent as the training of the physician for the work of general practice" and further stated than "the only places in which this work can properly be done are the universities and colleges, in which adequate facilities are afforded by well equipped laboratories."

In 1911, MacCuen Smith[21] presented to the American Laryngological, Rhinological, and Otological Society, an extensive report, embracing a number of written opinions from professors in Oto-Laryngology in leading universities.

Following the ensuing discussion, a small committee was appointed to report upon, "the best methods of teaching Oto-Laryngology in undergraduate, and post-graduate schools."

This report was forthcoming in 1913,[22] and adopted in so far as it referred to undergraduate teaching, but the other associations of specialists were invited to unite in forming a Joint Committee to decide as to the Post-graduate problem.

The suggestion met with a hearty response, and in the following year a Joint Committee representing the American Laryngological, the American Otological, the Academy of Ophthalmology and Oto-Laryngology, the Section of Oto-Laryngology of the American Medical Association, and the American Laryngological, Rhinological, and Otological Society, began its labors, only to be interrupted by the Great War, so that its final report was not issued until 1920. This was at once published and forwarded to every University, as well as to the leading Hospitals, and Medical Journals of North America. The conclusions have already been stated.

Just as this report was published, however, the Council on Medical Education, of the American Medical Association, recognizing the urgency of the general question of graduate study, appointed fifteen sub-committees, representing as many specialties, (and among these one in Oto-Laryngology) to prepare reports for presentation at the 1921 session of the American Medical Association. The findings of this committee have been quoted in full above.

In the United States and Canada, every medical teach-

ing body classified by the American Medical Association in 1920, as class A.—Acceptable Medical Colleges,[23] and which are teaching the clinical branches, appears to possess a chair in this specialty. There are seventy-two mentioned in class A. Of these eleven teach the primary subjects only, and of the remaining sixty-one, I have examined the calendars of fifty-eight.

In each of these there is one chair, and in several, the specialty is divided between two chairs, Otology, and Laryngology. It is also to be again remembered that all students are examined by specialists as a necessary preliminary to a degree.

There are several very important "sins of omission," however:—

1st. An examination in Oto-Laryngology is seldom, if at all, demanded by Boards which examine for license to practise. This has no significance of importance, so long as the subject forms part of the examination for a degree.

2nd. There are few recognized degrees, or diplomas, which the would-be specialist may attempt to secure. It is true that an advanced degree after a two years' course is granted by the University of Iowa, but the class is limited to two students. In the Graduate School of the University of Pennsylvania, an eight months' course is required to obtain a certificate, and a longer to obtain a diploma, and it would appear that the degree of Master of Medical Science (Oto-Laryngology) may be attainable. The classes are limited, and the candidates are selected.

The university of Minnesota has an organized course of three years' post-graduate work leading to a Ph.D. (Oto-Laryngology), with a limited number of paid fellowships. Apparently about five men can be accepted yearly.

These three comprise the only institutions of which we are aware, in America, where degrees in the specialty can be obtained, and at the outside only about ten candidates can be turned out yearly, obviously a number far from sufficient to supply one hundred and twenty millions of population.

The American College of Surgeons, while admitting Oto-Laryngologists to its fellowship, has not yet laid down any definite qualifications other than those required from general surgeons, nor has it in contemplation any provision for a course of training in the specialty.

There are, however, other avenues of entrance which provide a modicum of training. A small number of hospitals, general and special, have offered a varying number of internships in Oto-Laryngology, with a service of from twelve to twenty months. There is serious competition for these posts, and the standard of entrance requirements is therefore rising. During the last quarter of a century, most of those who desired to enter the specialty seriously, and to qualify for university and hospital appointments, have sought these positions, and have, at the completion of their period, taken further post-graduate work in Europe.

In New York, thanks to the energizing stimulus of the new York Association of Medical Education,[24] The Manhattan Eye, Ear and Throat Hospital, and The Post-Graduate Medical School, are from October, 1919, providing eight months courses in Oto-Laryngology, inclusive of anatomy, physiology, etc. Other institutions, such as the New York Eye and Ear Infirmary are, it is understood, expected to follow suite.

In Chicago, Detroit, and elsewhere, similar courses are, it is understood, being organized.

It is wise at this point to remind ourselves of the words of Sir Andrew Macphail,[25] "Medicine is the only profession that shows any concern for the further education of its graduates. Upon a given day the graduate may profess that he has acquired the mystery, but no one believes him. There is a great gulf fixed between knowing a thing and professing to know it, and a still wider gulf between knowing and the doing of it. Study of medicine must continue so long as life endures."

We have, we trust, placed before the reader sufficient data to enable him to estimate the exact position of the respective

countries which have been foremost in advancing the cause of education, medical and otherwise. The cause is the same, in whatever language it may be expressed. The profession is eager, in every land where modern medical science prevails, to justify its existence to the public, by elevating the standards of education. This review of the progress of one specialty in the first quarter of the twentieth century, demonstrates that much has been done, and that much is being attempted.

It is needful that every member of the profession should possess himself of the knowledge herein assembled, in order that he may give wise counsel to those would-be students who apply for advice as to the wisest course in study—that he may influence his colleagues and the public, whether in university, hospital, school, municipal, business, or private circle—that he may prove himself to the limit of his advantages a factor in the great task of making progess upward.

The value and the necessity of post-graduate study, in the various branches of medicine, is occupying the attention of many universities and medical bodies, and requires no demonstration here. Advance will be made, however, by the *vis a tergo,* and the public must be educated as well as the profession if there is to be a healthy reaction.

The universities must recognise that when six thousand applicants[26] demanded post-graduate education in America in 1920, they have a duty to their students which is not terminated by the conferring of a doctor's degree, and that post-graduate instruction is as important as under-graduate and must be provided for. This has been again emphasized by Dr. Bevan in his address on medical education before the American Congress, held in Chicago in March of the present year (1922).[26]

The public must recognize that nothing but the best in medical education, under and post-graduate, must be demanded and obtained.

Too much emphasis can hardly be laid upon the assertion that the stress of post-graduate teaching in Oto-Laryngology, must be placed *upon the taking of the case record, the examination of the patient* and upon the *differential diagnosis.*

Hitherto it has been laid upon the operative technique, and the ordinary courses of the post-graduate schools should be held responsible.

The post-graduate school has its place of usefulness, nevertheless, and that is upon the conclusion of a preparatory course in the basal sciences, and examination of the patient, as indicated in the eighth recommendation of the O.M.A. report.

We are inclined to think that were one hundred trained men turned out yearly, this would supply the seepage of the specialty. There are also quite sufficient class A. hospitals to provide internships for these men.

The statement that in America "Opportunities by which graduate students may prepare themselves by long periods of work for scientific and skilful practise of clinical specialties are woefully lacking," is as true of Oto-Laryngology as of any other branch of medicine.

To sum up—in the United States and Canada, we need means by which *Specialists* may be *labelled,* to the Public, and to the Universities and Hospitals requiring to make appointments to their Staffs, as reasonably trained, and to that end possessed of:—

a. Graduation from a class A University.
b. Post-Graduate year as a rotating house surgeon.
c. Further satisfactory post-graduate education in medicine and surgery, and also in the anatomy, physiology, physics etc., bearing on the specialty.
d. Subsequent post-graduate study of the specialty for at least eighteen months, and inclusive of laboratory training. This may be obtained in various ways but preferably as assistant in special clinics of standing, or as houseman in the Oto-Laryngological Service of a general or special hospital.

Those Universities which possess post-graduate departments might well aid in this matter by providing machinery whereby

men and women who have obtained the above grade, may be provided with a distinctive diploma or degree.

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Selected Articles

THE TREATMENT OF COCAIN POISONING

K. Mayer, Zeitschrift fur Ohrenheilkunde, 82 Bd., p. 42, 1922.

It has been shown experimentally that when a given dose of cocain is well diluted it is three or four times less toxic to rabbits than the same dose in concentrated form. Kochmann & Zorn in 1913, found that the addition of salts of potassium greatly increased the anæsthetic action of the cocain, and Hirsch, following this up, found that a three per cent. solution with two per cent. potassium sulphate had as great an effect as ten per cent. cocain without the potash salts. However, it was found that the weak solution of cocain with potash was just as toxic as the stronger solution of cocain alone. Some highly toxic compound is evidently formed, as controls with cocain alone and others with potash alone did not show the toxic effects. The addition of potash salts increases the toxicity of cocain seven times.

The symptoms of cocain poisoning vary considerably in man. The mildest cases show a tendency to fainting, precordial discomfort, nausea, and frequent pulse. Another form causes psychic exaltation, talkativeness, cramps and dyspœa. At first there are mostly irritative symptoms, such as epileptiform convulsions with unconsciousness. In addition there are pallor and dilated pupils. This stage passes into a paralytic one and death occurs from paralysis of the respiratory centres.

To combat the stimulation phenomena, ether, chloroform, or morphia have been recommended. Morphia has, however, the very serious drawback that it is also a drug with a tendency to cause respiratory paralysis, and hence, when the irritative stage is over, the morphia and the cocain act to-

gether as depressants on the respiratory centres. Mayer, in a series of experiments on frogs, found that when one-sixth or one-fourth of the lethal dose of cocain was injected along with a small dose of morphia, which would otherwise have been harmless, the animals died. Control animals with cocain alone or morphia alone did not die. Hofvendahl in 1921 had the same results in dogs and rabbits, and concluded that the administration of morphia in cocain poisoning was useless, and even harmful. It does not follow from this that all combinations of morphia and cocain must be avoided. The administration of morphia beforehand allows one to be more sparing in the use of cocain and hence a toxic dose is less likely to be reached. However, morphia must never be given when there is already any symptom, however slight, of cocain poisoning. Amyl nitrite acts only symptomatically. Pilocarpin has been reported as bringing about a rapid recovery in a case of cocain poisoning, but this result was not confirmed in animal experiments. Other narcotics, such as veronal, chloral hydrate, etc., have the same objections as morphia. A drug is required which does not depress the respiratory centres but stimulates them. Strychnine is unsuitable as it is itself apt to produce cramps and convulsions. In calcium chloride, however, we possess a remedy which stimulates the respiratory centre without these drawbacks, as was shown by Auer and Meltzer in 1906. Mayer, using the isolated frog's heart as experimental material, found that a severely-poisoned heart could be brought back to normal with calcium chloride. A previous dose of calcium chloride either prevents or greatly diminishes the action of the cocain. Similar results were obtained with guinea-pig uterus. This pharmacological antagonism was further proved on whole animals. That it was not due to slowing of absorption was shown by the fact that the paralytic symptoms came on at the same time in the animal with cocain alone as in that with cocain and calcium. Even when the calcium chloride was given ten minutes after the cocain, i.e., when the paralytic symptoms were already present, a speedy recovery was produced. A further series of experiments was carried out on guinea pigs. It is known that 0.04-0.06 gm. of cocain per kg. of body weight is a certain lethal dose if injected subcutaneously. The animals die with severe convulsions. Mayer injected a dose of cocain in

one per cent. solution which definitely exceeded the lethal dose, and at the same time injected four times the amount of calcium chloride in three per cent. solution. The animals had severe convulsions but recovered in an hour. The experiment was repeated with one-sixth more than the lethal dose together with 0.3 gm. calcium chloride per kg. In fifteen minutes the animal took severe convulsions lasting thirty minutes, but recovered completely. Several days later the animal was killed by the same dose of cocain without calcium. In other animals, the injection of lethal doses of cocain with calcium gave no toxic symptoms.

Mayer has used calcium chloride in slight cases of cocain poisoning in the human subject with satisfactory results. He recommends 5-10 cc. of a ten per cent. solution given intravenously. If given subcutaneously a troublesome infiltration is produced. Other soluble salts of calcium may also be used as it is the calcium ion which is important.

J. K. Milne Dickie.

ADVICE TO THE YOUNG GRADUATE

The Popularity of Medicine

The medical profession seems to be more popular than ever. Students of both sexes are pouring into the schools, and it is to be feared that not a few will find it difficult to secure admission through lack of accommodation.

Seeing that the work of the dental surgeon is on the whole less arduous and permits of more leisure than that of the medical man and further, that the financial reward is more speedy and probably also more ample, it is somewhat surprising that there should be a greater rush to enter the medical profession than to join the ranks of dentistry.

The Choice of a School.

Though family tradition will doubtless continue to influence the student in the choice of a medical school, on the whole he will be wise to join a school in close proximity to his own home, and if possible to continue to live at home, on the score both of comfort and economy.

The Choice of a Qualification

If a man is ambitious to take a leading part in his profession he should arrange his plans from the beginning so as to secure the highest qualifications. If, for instance, he wishes to specialize in medicine it will be necessary to take a medical degree; while if he intends to devote himself to surgery the fellowship of a surgical college will be essential.

My advice to every student is that he should make up his mind to secure some degree, or qualification of high standing, if only for the satisfaction of his *amour propre*. No matter where he settles, or what branch of medical or surgical work he takes up, a good qualification will be evidence to his medical brethren that he has passed successfully through a severe course of study.

Not that high qualifications necessarily bring success; or even necessarily indicate exceptional skill; for the most brilliantly qualified man very soon gets surprisingly rusty unless he is constantly refreshing his knowledge, while he speedily falls behind the times unless he keeps in constant touch with the advance in medical and surgical science.

Thus it is that we may often find men with modest qualifications more clever and successful at their work than those who have had the most brilliant careers at college.

Advice to Students

Let me here repeat the advice I have given on former occasions. The student should aim at keeping physically fit, for the better his health the easier and more enjoyable will he find his work. He should take a good mid-day meal and not hurry over it.

He should have his eyes tested as a matter of routine and, if necessary, be fixed up with suitable lenses.

Method of Work

Much may be done to lighten his work by concentrating on the essential. It is better to get up the important things thoroughly well than to burden the mind with a mass of detail, most of which will probably soon be forgotten. For this reason I advise the student not to neglect the use of *small* books.

Trust as far as possible to visual memory in learning such a subject as anatomy.

Don't work when you feel tired, and don't work too late.

Never miss a coaching class or college examination. If you have an opportunity of coaching a willing student on a subject you know better than he, do not neglect it; for the teacher often derives more good from his teaching than his pupils. In this way he tests and consolidates his knowledge.

Medical Careers

Several lines of work are open to the medical man. He may specialize in the various branches of medicine and surgery—neurology, diseases of the heart, lungs, digestive system, eyes, ears, throat, skin, etc. He may join the army, navy, air force, Colonial service; become a school medical officer, a medical officer of health, a tuberculosis officer. He may devote himself to research work, or missionary work, and—most difficult and exacting of all—he may enter general practice.

General Practice

Under the panel system the bulk of general practitioners of the country become part-time civil servants. The panel patient insures himself against sickness by paying a fixed annual sum into the national coffer and the panel doctor gets so much per head for each of his panel patients, whether they fall ill or not. It was once thought that the Ministry of Health might wish to introduce a whole-time salaried State medical service, but there is happily little prospect of this taking place—for the present at all events. In any case, it is certain that a considerable section of the public will prefer to have a doctor of their own choice and to pay him his private fees.

The Royal Naval Medical Service

Some 3,000 medical men are employed in the Army, Navy, Air Force, and Indian Medical Services. The number of junior medical officers in the navy being at present below requirements, surgeon-lieutenants can enter for short periods of service in the Fleet. The period of engagement is for three years, with the option of continuing for a further twelve months.

After the first six months such a temporary lieutenant will be eligible, at the discretion of the Admiralty, for transfer to the permanent medical staff of the Navy.

The Army Medical Service

The prospects of men entering the Army Medical Service have been much improved since the war.

An officer may accept employment in the Foreign or Colonial Services, including the medical service of the Egyptian Army, the sanitary service of the Egyptian Government, and the medical services of the various foreign and Colonial Governments.

Service on the West Coast of Africa carries with it certain compensations in the shape of extra pay and furlough.

Specially trained officers are now appointed as assistant and deputy assistant directors of hygiene to all commands and garrisons; and schools of hygiene as applied to barracks and camp life have been established in all brances of the service.

Officers showing an aptitude for pathology are encouraged to specialize in this subject, and may qualify as specialists in bacteriology and pathology at the Royal Army Medical College.

Officers of the rank of colonel and major-general are now being appointed as consultants both in medicine and surgery, a wise arrangement which will encourage men to continue their medical and surgical studies. Facilities are also afforded for special training in hygiene, pathology, and administrative work.

The Royal Air Force Medical Service

Short service officers are admitted for two years, which may be extended to four years. Those not selected for permanent service pass into the Royal Air Force Medical Reserve.

The general features of this service are on the same wise lines as in the Army Medical Service.

The Indian Medical Service

The condition of this service in respect of pay, furlough pay, pensions, and the status of administrative medical officers, has recently been greatly improved. A full state-

ment of the attractions, pay and rates of pensions in this service will be found elsewhere in this issue of the journal.

Officers who are granted sick leave to the United Kingdom are now entitled to free return passage for themselves and their families.

Prison Medical Service

For the larger prisons the appointment is a whole-time one. The appointment in the first instance is to the post of Medical Officer, Class II; Medical Officers, Class I, are appointed from the seniors in Class II as vacancies occur.

The remuneration is not satisfactory.

The Colonial Medical Service

There is no unified colonial service similar to that of the Indian Medical Service. The appointments are made by the Secretary of State for the Colonies. There is room for considerable improvement in this service, but it is probable that present deficiencies will speedily be removed.

Medical Missionaries

For those who have a call for this work there is abundant scope in different parts of the Empire. At the present time most of the mission hospitals are understaffed.—*The Medical Press and Circular.*

Book Reviews

Clinical Diagnosis. Case Examination and the Analysis of Symptoms, by Alfred Martinet, M.D., Paris, France. With the collaboration of Drs. Desfosses, G. Laurens, Leon Meunier, Lutier, Saint-Cene and Terson. Authorized English translation from the third revised and enlarged edition by Louis T. de M. Sajous, B.S., M.D., Philadelphia. With 895 text engravings and several full page color plates. Complete in two Royal Octavo Volumes. Volume 1—*Physical and Laboratory Diagnosis.* Volume 2—*Analysis of Symptoms.* Philadelphia: F. A. Davis Company, publishers. 1922. Price for two volumes $14.

The author opens by discussing the evolution and present state of diagnostic science; following with a consideration of the causes of mistaken diagnosis—ignorance, faulty examination and errors in judgment. Then follows a section on diagnosis of diseases of the (1) intestinal tract—physical, bacterial and X-ray; (2) respiratory passages—exthrathoracic and intrathoracic; (3) circulatory system—intrathoracic and peripheral, including inspection, palpation, auscultation, percussion, radiological, together with functional tests of the circulation; (4) physical, chemical, cytologic examination of the blood; (5) examination of the genito-urinary tract, and of the urine; (6) examination of the nervous system; (7) skin and appendages. Chapters follow on parisitology, bacteriology and spectroscopic examination.

Of especial value are the remarks on the principles in the conduct of a medical examination—*totum, cito et exactum.* Concrete illustration is given of the clinical application of the various procedures of medical examination, (1) of an ordinary outdoor visit (examination at the bedside with rudimentary instrumentation); (2) of an ordinary office visit (an ambulatory chronic case); (3) of a special office visit (examination with special office equipment).

The author closes with a chapter on "The Needs in Present Day Medical Organization," and takes a glimpse into the future of medicine.

Diseases of Infancy and Childhood. Their Dietetic, Hygienic and Medical Treatment. A textbook designed for practitioners and students in medicine, by Louis Fischer, M.D. Ninth edition, revised. In two volumes: Volume I.—*Infant Feeding and Organic Diseases*—with 146 text illustrations, several in colors and thirty-seven full-page, half-tone and color plates. Volume II.—*Infectious Diseases—Cerebral—Orthopedic and Eye, Ear, Skin, etc.*—with 147 text illustrations, several in colors and forty-three full-page, half-tone and color plates. F. A. Davis Company, publishers, Philadelphia. 1922. Price for two volumes, $12.00.

Volume I deals with a general outline of the anatomy and physiology of the infant, and of its digestive tract. Especial attention is given to the management of marasmic and premature infants. Maternal and artificial feeding are stressed and the importance of preventing deficiency diseases. Milk modification receives due emphasis; and there is a new chapter on vitamins. Radiography in diagnosis and therapeusis is discussed. The chapters on acute, infectious diseases have been rewritten.

Exanthem Subitum (a new disease) is described. Transfusion, lumbar puncture and the cutaneous reaction in tuberculosis and in diptheria treated fully.

Chapters on urine bacteriology, anaphylaxis, asthma, diseases of the blood, skin and ductless glands have been revised.

Illustrations are good. Reports of clinical works are in good evidence. Many prescriptions are appended.

Anatomy of the Brain and Spinal Cord, by J. Ryland Whitaker, B.A., M.B. (Lond.). Fifth edition. Edinburgh: E. & S. Livingstone, 17 Teviot Place. 1921. Price 12s. 6d. net.

This little book aims at brevity and lucidity. It is graphic, accurate and well-indexed and provided well with splendid diagrams. It has the advantage of both anatomical nomenclatures and each section is described under a duplex heading. For a practical lucid description of the central nervous system the book cannot be surpassed. Each and every page should be read in detail as no word on any page is superfluous. It has gone to the fifth edition and the author has ably maintained his original object of having a ready companion and reference for any information sought by those interested in the central nervous system. There is no more pithy hand book of 250 pages with as good diagrams available for the student or the practical physician or surgeon. It has a very extensive bibliography.

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CONTENTS

EDITORIAL

Page

Abdominal Surgery in Chronic Disease 195
Taking Stock 199
Pneumonia 202

ORIGINAL CONTRIBUTION

Let Us Awake, Ernest A. Hall, Victoria, B.C. 207

SELECTED ARTICLES

The Stage Doctor 215

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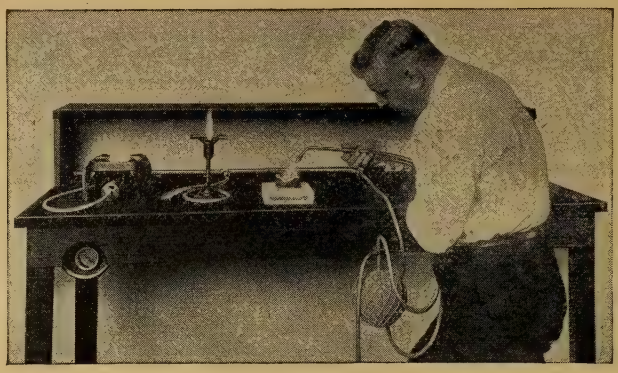
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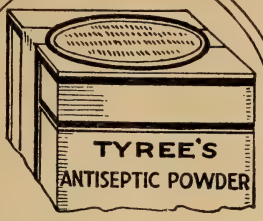
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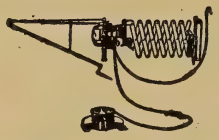
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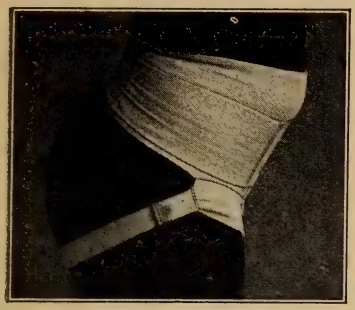
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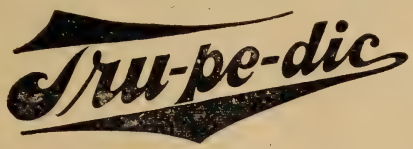
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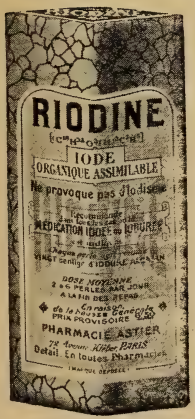
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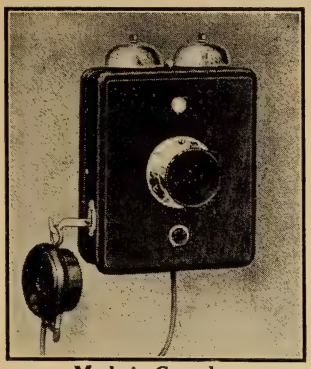
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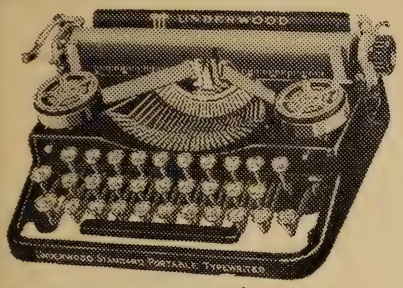
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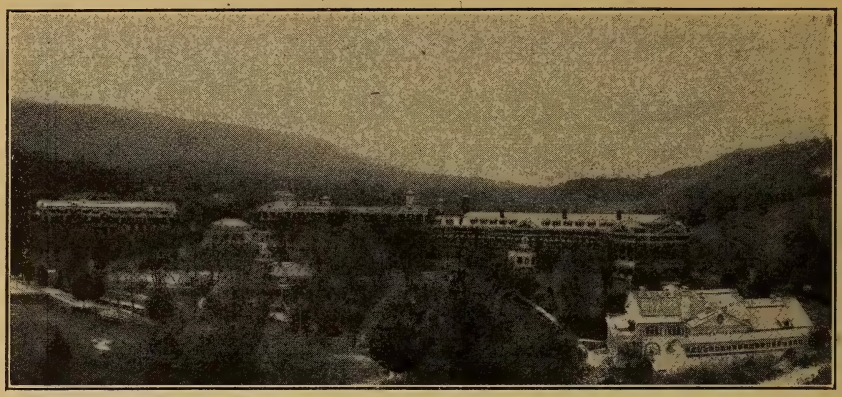
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A Journal published monthly in the interests of Medicine and Surgery

VOL. 52 TORONTO, DECEMBER, 1922 No. 6

Editorial

Abdominal Surgery in Chronic Disease

The *British Medical Journal* publishes the address on this subject of James Sherren, F.R.C.S., surgeon to the London Hospital, delivered before the Suffolk Branch of the British Medical Association. The speaker devoted his attention to the indications for, and the limitations of, surgery in chronic abdominal disease. The surgeons saw these sorts of patients after physicians had unsuccessfully tried out rest, diet, and drugs, in order to see if by their art they could remove the cause of the symptoms, or somehow alter the relationships of organs that the cause affects unfavorably.

The aim should be to discover the cause of the disease and so prevent the development of lesions necessitating mutilating operations, such as removal of the gall bladder, spleen, parts of the

stomach and intestines. A man may be better off by such operations, but not the man he was before the onset of the disease for which operation was done. If these mal-conditions can be prevented—and many of them can—the surgeons' art will be lost, except in dealing with injuries from accidents. There is a preventive surgery as well as a preventive medicine. Timely appendictomy will anticipate the development of many ulcers of stomach and duodenum and gall bladder disease—if the appendix is really diseased. Wholesale removal of this organ in visceroptosis, sacro-ileac strain, and the like, only brings surgery into disrepute. Early and sufficient treatment of acute gastric ulcer will prevent it becoming chronic, and early operation on the latter will prevent malignancy. Removal of the diseased gall bladder will not only hinder recurrence of gall stones (when undertaken with this complication) but also the possibility of carcinomatous development. Drainage of the gall bladder is not curative; all bladders sufficiently diseased to need operation, need removal, and there is no more satisfactory operation in surgery with so slight a risk.

Before opening the abdomen every effort should be made to discover the cause of symptoms. One must, at least, be able to say that surgery will help. One should blush on opening the abdomen to find no lesion.

In operating on the abdomen the whole interior should be explored. It is often necessary to open a gall bladder and inspect it for disease, as stones are not always palpable.

Ulcers of the stomach or of the duodenum may be missed through making too small an incision and only examining digitally. The risk of carcinoma following ulcer is a real one. Sherren finds that in 45 per cent. in one series, carcinoma has followed on chronic gastric ulcer. There are also the dangers from hemorrhage and perforation. Operation should be performed in chronic duodenal ulcer, because of the two last-named complications. Perforation may occur during a period of latency. After a posterior gastro-jejunostomy or partial gastrectomy the great majority are relieved and 90 per cent. cured.

The appendix should not be removed merely for pain in the right iliac fossa or right side and tenderness on palpation. Removal of the appendix will not cure disease of the gall bladder, stomach, and duodenum. When operating on the appendix for appendix dyspepsia, one should never be satisfied with mere removal of it, without examining every other abdominal viscus. Sherren has had often to re-operate after other surgeons had done pure appendicectomils for chronic ulcers, gall bladder disease and even carcinoma of the stomach.

Limitations of surgery in abdominal disease will be fewer if one remembers that the days of small incisions are over. It is impossible to exclude disease without examining suspected organs by sight and touch.

As to the colon: an indication for surgical treatment is disease or incapability of performing

function. If the disease has not extended beyond the limits of the organ, the affected portion with its lymphatic area of drainage should be removed. It then must be remembered, however, that removal of the ileo-caecal valve profoundly alters intestinal digestion, and that removal of the whole colon or its right half must seriously interfere with the functions of the alimentary tract. This organ is necessary and should never be removed unless its retention threatens life. In chronic ulcerative diseases of the colon, Sherren has had brilliant results from appendicostomy. Ileo-sigmoidostomy is useless in ulcerative colitis. In short-circuiting for irremovable carcinoma, colon should be attached to colon.

In visceroptosis, the more experience Sherren has in operating the less success he expects. It is not a disease that shortens life; therefore one should carry out nothing that should do so. Such operations as fixation of the colon, partial colectomy, plication of the caecum will disappear.

After all is said and done, there are still pains and discomforts in the abdomen that cannot be removed with the appendix, or by fixing viscera or dividing adhesions. As to the gall bladder, one must not only see and feel it but also explore it by opening it, if disease is suspected. In the early stages of gall bladder disease, cure by surgery is safe and sure. With stone in the common duct and acute infections the risk is greater; and malignancy may terminate even chronic simple cases of gall bladder disease. When the gall bladder is diseased its re-

moval in two stages is indicated, if life or the integrity of the common duct would be threatened if done in one. Drainage done after removal of calculi will not certainly cure the patient nor prevent carcinoma, in a gall bladder, believed on external examination to be healthy at the time of drainage.

As to the removal of the spleen—until we are fully cognizant of its functions we cannot understand the part it plays in disease and why its removal in certain cases is efficacious. In suitable cases its removal is followed by restoration in health. Recovery is dramatic in spleno-megalic haemolytic jaundice. Splenectomy in pernicious anaemia and in lentæmia is experimental. Until more evidence is forthcoming we should stay our hand.

Taking Stock

Dr. A. J. McKenzie, chairman of the section of the Toronto Academy of Medicine on Internal Medicine, in his opening address, stated, quite rightly, that it was well for physicians once in a while to take stock of what they were doing. We were going through the world but once and should consider why we were here and what we were achieving—just as merchants do.

As physicians, we are often baffled in our diagnosis and helpless often when it comes to treatment, e.g., we are summoned to a child, discover it suffering from anterior polio myelitis, and we stand powerless before the agonized mother. How little

we can do in typhoid fever, pneumonia, meningitis, eucipholitis, cancer of the stomach. Even malaria is not always amenable to quinine, nor rheumatic fever to the salicylates. Septicaemia baffles all our resources. But in spite of our limitations and failures we go on; we do not quit the field and attempt some other line of work, such as farming, which we know we can do.

These remarks do not apply so much, the speaker maintained, to the surgeon by whose art the patients are manifestly benefitted, or to the members of the medical health section, or to the pædiatricians who deal with children, or to the obstetricians.

In our hospital medical wards patients go to see miracles performed by the "hospital doctor." We get a case of pernicious anæmia, but have we ever cured one? Or a case of mitral stenosis, cancer of the pancreas, tumor of the brain, chorea, tuberculosis, chronic osteo-arthritis?

We take the blood pressure but we cannot change it. Perhaps it is as well we cannot. We secure from a luetic patient a positive Wasserman reaction, but the lesion remains. We can secure an X-ray picture of the chest, but it doesn't help us to cure the patient. We count the blood cells, but we cannot supply the lack. . . . The more we know the less we do. We know our remedies are inefficient or worse. . . . This is no imaginary picture. But are we to sit in sackcloth and ashes and try to delude ourselves—as our patients do sometimes? No. "Do ye the next best thing." Can we turn our backs? The road is

long and hard. We can give the glass of water to the thirsty. We can do our best, leaving the rest to a Higher Power.

We must do all we can in the way of collecting and sifting knowledge—to perfect our diagnosis. Our physical examinations should be thorough and painstaking. The busy practitioner too often takes the patient's word for certain conditions and does not prove the thing for himself.

Too often, too, we look too much on the physical, forgetting the mental, and treat the patient as we do a laboratory animal. How often one notes the reaction of fear and anxiety in the patient newly admitted to the hospital. How soon one notes improvement after these are dispelled. Every patient should be carefully observed mentally as well as physically. Dubois and other neurologists have shown us the importance of considering the mental as well as the physical. Nothing is trivial in the treatment of the sick. One of our former Toronto teachers in medicine laid great stress on orders for the care of his patients—writing pages of instructions to his internes and nurses. Some of his pupils have learned the value of this practise.

From our pessimism we can rise to hope, concluded Dr. McKenzie. There is much we can do. If the greater things are beyond us, we can strengthen and encourage our patients for the battle. This may help nature. Let us depend on the safe remedies and the new therapeutic discoveries which have given practical proof of their virtue. Let us

employ the little things that will help. Let us learn from those with experience. This generation seeks for a sign, but there shall no sign be given. But we can learn some lessons. "If I tell you it once, and tell you it twice, and tell you it thrice, it is true."

Pneumonia

At a recent meeting of the medical section of the Academy of Medicine Dr. F. McPhedran gave a resumé of the treatment of a series of pneumonia cases in the Toronto General Hospital. The treatment has been standardized on well-defined lines. The efforts have been partly successful and partly unsuccessful. There has been no reduction in mortality. All efforts in the treatment of lobar pneumonia have been unavailing in so far as the reduction of mortality is concerned, excepting patients of the type I class; treated under ideal conditions, and placed under treatment within the first day or two, type I serum administered. Patients, however, seem to endure their illness better than under former methods of treatment. In lobar pneumonia the rate of metabolism is much higher than in health, the nitrogen portion of the output being 18 grammes per day, as contrasted with 14 in health. It was important, therefore, that this loss should be checked. This was done by adequate feeding. Too often the patient is not urged to eat. At the onset of the disease he has a protective reaction—a loss of appetite. This loss of appetite is simply voluntary. If the patient is urged to eat he will (after two or

three days) eat what is given him. Very few will not eat what is brought to them. The nutriment should be bland. Too often patients receive nothing but milk and lemon albumen, with the addition of orange juice. It occurred to us, said the speaker, if we gave enough nitrogen in food readily absorbable it would reduce the protein loss.

The pædiatricians had noted that children who were given too much carbohydrate food suffered from a certain type of indigestion; while those overfed on protein exhibited another sort. But a judicious combination of both sorts of diet counteracted the other's form of digestion. The fermentation of the carbohydrates was annulled by the putrefaction of the ingested proteids.

This principle was taken advantage of in their treatment of pneumonia. The proteid most in favor was scraped beef. It had the added advantage of giving the friends of the patients something to do, a useful point to remember in practise. The fever does not interfere with digestion. The assimilation of this added protein will not only tend to keep the skeletal muscles nourished, but also those more important taking part in the structure of the vascular system.

There was one drug highly beneficial as a stimulant, and every patient should have it from the beginning of the disease, and that was digitalis in large doses given freely—two doses of two c.c's of the concentrated standard tincture in the first 24 hours and kept up until the patient shows signs of

digitalis poisoning—slowing of the pulse and vomiting. In the series of cases reported, Dr. McPhedran recalled two patients who vomited and two who exhibited heart block and fibrillation. Both these patients were Chinese. Chinese resident in certain districts are accustomed to various drugs like digitalis. Christian, of Boston, who uses digitalis says he has never seen a patient who has had too much digitalis. The vast majority do not get enough.

There was only one other real stimulant—pituitirin. It may be used freely—1 c.c. every 3 or 4 hours—for shock or abdominal distention.

Where there are signs of failing right heart, no cardiac stimulant is so good as a rapidly performed venesection, sufficiently vigorous, one authority says, to spatter the operator and two nurses with blood.

Whiskey is not used unless the patient has been an alcoholic—accustomed to a rapidly diffusible food. It increases the heat loss; it dilates the surface capillaries, thus lowering the disastolic pressure—which is contraindicated. Moreover, it stimulates the bronchial mucosa, thus tending to an increase in bronchial secretion, which is deleterious.

The most common complication of pneumonia is pleurisy—causing pain and difficulty of breathing. Mustard plasters should be applied and codeine given internally. Morphia should never be given, as it dams up the secretions, inhibits the action of the respiratory centre and is habit forming. Codeine is not habit forming. One may give of it ½ a grain for pain, repeating in 20 minutes if necessary.

If fluid forms it should be aspirated as soon as detected. Pressure of walled off fluid against a consolidated lobe which adjoins the heart is dangerous. There is the added toxæmia from absorption of the disintegrated tactena and hemic material in the fluid. The patient's back should be percussed and auscultated daily while he sits up. X-ray examinations do not help much.

NEW MEMBERS OF THE AMERICAN COLLEGE OF SURGEONS

Sixty-three Canadian surgeons were made fellows of the American College of Surgeons at the concluding session of the organization's congress in Boston on October 27th. The Ontario list follows:

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Toronto ——— Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Original Contribution

LET US AWAKE

Ernest A. Hall, Victoria, B.C.

Many years ago it was said, "try all things, hold fast to that which is good." In later years Goethe told us that we should be ready to accept new truths, though at first sight they may threaten our mental structure with dire disaster, and One greater than all has said, "ye shall know the truth and the truth shall make you free." Why do I make these preliminary statements? Because we are surrounded by a marauding host of irregulars who are keeping up a guerilla warfare against us with more or less success; with success directly in proportion to the amount of truth contained in their teaching, not necessarily in their theory, for a sick man cares nothing for theory, but in the practical application of the treatment and its results. "By their fruits ye shall know them" was once considered an excellent method of determining the value of any teaching or practice, a test that we might with some reason apply to the many, and still multiplying, cults which are camped upon our horizon.

The scorner's seat may be luxuriously upholstered, but is no satisfactory place for a scientifically constituted mind to rest. "There is a principle which is a bar against all information, which is proof against all argument and which cannot fail to keep a man in everlasting ignorance, this principle is contempt prior to examination." There are yet many worlds to conquer, and also many conquered worlds that many of us are yet ignorant of, and one of these worlds is the spine and its place in medicine. As a result of this hiatus in the armamentarium of the medical man, in harmony with the law of nature abhorring a vacuum, a something has arisen to fill the place that we have neglected to occupy, and that something contains a modicum of truth even though too often expressed

through the mouths of the uneducated. It is the truth struggling for expression and, when refused the mouthpiece of the regular profession, it seeks other outlets.

If you glance backwards you will see that all so-called irregular systems had their origin and met their constituency in our omissions. Let me emphasize this statement, that there is no form of unorthodox activity that has not had its inception in our deficiencies, and its success in our neglect. Opposition cannot successfully obstruct, nor criticism prevent, the development of any system that bears a message to a weak, suffering humanity.

We can never hope to successfully compete with these cults unless we fight them with their own fire. All legal procedure against these factors but give them emphasis and strengthen their position in the community, and to the position of the irregular add the role of martyr.

As early as 1834 Dr. Greffin, of Edinburgh, showed the relation between certain symptoms of thoracic and abdominal disease and tenderness in certain definite spinal regions. The early Swedish gymnasts also recognized this association. In 1841 Marshall Hall published his work which firmly established the importance of the spinal reflex. Abrahams, of San Fransisco, has shed still more light upon this subject, and has shown that diseased viscera universally give a sensitive condition of the roots of the spinal nerves supplying the diseased organ. He has also shown that in manipulation, vibration or sinuosidal current applied to various areas of the spine, very definite results follow, results that can justly be classed as reparative and in fact at times, little less than miraculous in the curative effect. This paper will not admit of the discussion of the many conditions in which this method of treatment has proven sucessful, but if asthma can be relieved by manipulation of the fourth and fifth cervical, if acute "cold" with nasal obstruction can be relieved by percussion of the seventh cervical, if goitre can be successfully treated by the same procedure, if blood pressure can be reduced as much as thirty mm. in one treatment, if dysmenorrhea can be relieved by percussion of the first three lumbar, if vomiting in pregnancy yields to percussion of the fifth dorsal, and aortic anuerism yields to vibration over the seventh cervical, and so on throughout the greater majority

of our troubles, there can no longer be any question of what the chiropractor is capable of accomplishing. The chiropractor has seized the opportunity that we have made for him in the neglect of this line of treatment, and has capitalized it. What more natural for one ignorant of anatomy to conclude that since the nerves are tender where they leave the spine, there must be "pressure" at that point, which inhibits function and causes disease of the organ supplied. Hence he proceeds to build up his theory of subluxation. He makes a "replacement" with a crack that any normal joint will give when forcibly manipulated, and the patient recovers, the recovery being partly due to the manipulation, and partly due to the belief that the chiropractor has found a dislocation, for did he not hear it being replaced with a crack? The fact remains that the case recovers through this manipulation, even if the theory is wholly unsupported by facts—yet, what does the patient care as to the theory? A cure he desired and a cure he has got in as large a percentage of cases as the regular profession can boast of.

Do not be surprised when I say that these special manipulations are capable of accomplishing as much as drugs can do, and at times very much more. The practitioner who overlooks the spine, either in examination or treatment, but plays into the hands of the irregulars, and need not be surprised if his clientele treks to the office of the chiropractor.

Now what is the application of all this? Gentlemen, it is simply, get busy. Reckless and wholesale denunciation can never take the place of knowledge.

The facts are there, the opportunity is here, we have not recognized the facts, nor have we lived up to our opportunity, a whole field of unexplored interest lies open before us. It is ours if we work for it, but denunciation and mental apathy will get us nowhere—"Go ye up and possess the land."

PART II.

Three years ago I picked up a book written by Dr. Abrams, of San Francisco and, after a cursory glance, I threw it down as the vaporings of a fanatic. A few months ago I again looked at this book only to be convinced that this man had, or thought he had, something which the average

medical man had not, and something that I at least was ignorant of and, desiring to combine recreation with an increase in information, I soon found myself in San Francisco dominated with a spirit of investigation, and determined to preserve the Missouri attitude until convinced.

Here I found the surprise of my life, medical practice based upon an exact scientific basis and made so plain that the wayfaring M.D., though a fool, need not err therein. I found the occult being deoccultedand the mysteries of the past stated in terms of the scientific accuracy of the present. I found disease recognized before it became disease, according to our cruder methods of thought, as well as so-considered incurable cases responding to Dr. Abrams' system. I found some seventy enthusiastic medical men and women, representing every State in the Union, crowding the clinic from eight-thirty until twelve-thirty, watching and taking part in the most unique and marvellous methods of diagnosis ever presented to the profession. Listen to what Mather Thompson, F.R.C.P., of London, who was a recent visitor to this clinic, says: "When I first heard of Abrams' claim that he could diagnose disease by the examination of a few drops of the patient's dried blood, I thought it fantastic." It was an article by Sir James Barr that made me think seriously and stimulated my interest in Abrams' theories. Sir James affirmed that not only could Abrams diagnose disease from the examination of the blood, but he could state the seat of the lesion, the sex and nationality of the patient. A statement of belief from such an eminent authority could only be treated with respect.

Those physicians who have tested Dr. Abrams' methods the longest are the most enthusiastic. In conversation with an eminent surgeon, Dr. Thompson of Oakland, he told me that Abrams' methods have given him excellent satisfaction. The exploratory operation has ceased to exist and other surgery has decreased fifty per cent., and that in the cases in which he resorts to surgery, the healing is much more satisfactory after having the patients for a time under the electronic treatment. Many cases of far-advanced malignancy have been cured, if I am to believe the word of the medical men and women who themselves were the patients. Of course, in anything as radically new as Abrams' work is, one meets with

the ultra-enthusiast who brings a large element of psychic force into his treatment, for which due allowance must be made when estimating the actual value of the system, but considering that factor, I am convinced that Dr. Abrams has made a valuable contribution to medicine.

I close with a quotation from Sir James Barr's article in the *Medical Press and Circular,* June 26, 1921: "His (Abrams') methods are effective at the very inception of disease, and thus at a time when they are amenable to treatment. In my opinion his greatest achievement, because most widely applicable, has been the early diagnosis and treatment of tuberculosis. He forestalled Finsen, and since then he has moved so far that he has a case of tuberculosis diagnosed and cured while the modern specialist is waiting for the appearance of the tubercule bacillus."

Is it not worthy of investigation by an overworked and discouraged profession? When we graduate we have twenty cures for every disease, when we have practised thirty years we have two hundred and twenty diseases without any cure for them. Abrams has given us a new hope.

SPINAL REFLEXES

Just an additional word to those who overlook the spine both in diagnosis and treatment, and cuss the osteopath or chiropractor whose chief field of operation seems to be that same region of the body—stop cussing, at least while you read the following table which is an abbreviation of that submitted by Sir James Barr, F.R.C.P., former president of the Bt. Med. Assn., and published in *Physico-Clinical Medicine*:

Vertebrae and nerves—

Cranial

Freezing over gasserian ganglion in front of ear relieves trigeminal neuralgia.

Cervical

2 & 3 Percussion stimulates the phrenic nerve, diaphragm and adrenals.

1 to 7 Freezing inhibits irritability of cervico-occipital nerves.

4 & 5	Lung reflex of contraction, useful in asthma.
7	Contracts thyroid, contracts heart and blood vessels, vaso-constriction arrests hemoptysis.

Dorsal

1	Vaso-constrictor, increases tone of sigmoif flexure.
2-5	Contracts splanchnich vessels in neurasthenia.
3	Closes pylorus and opens cardiac orifices of stomach.
3-6	Left side painful in heart afflictions.
3-8	Lung reflex of dilation.
3-4	Activates thyroid and mammary glands, depresses pituitary.
4-6	Contracts gall bladder.
4-7	Painful on pressure when a lesion is located on the lesser curvature of the stomach. At spine of 10th dorsal in lesion of fundus, 10th to 12th when lesion is in the greater curvature near the pylorus.
5	Splanchnic nerve opens the pylorus.
5-7	Contraction of splanchnic vessels.
6-8	Increases diuresis.
7	Diminishes activity of ovaries.
9	Distends gall bladder, increases ovarian function.
10	Vaso-dilator, empties appendix.
10-11	Right side tender on pressure in cholecygtitis.
10-12	In renal affections, tender on side of disease, stimulates uterus, raises prolapsed ovaries.
11	Enlarges spleen, liver, stomach and intestines, dilates sigmoid and relieves spastic constipation.
12	Contracts cæcum, raises movable kidneys, sinusiodalization reduces prostate.

Lumbar

1	Dilates appendix.
1-3	Stomach reflex of contraction, contracts liver and spleen and may reduce a paroxysm of epilepsy, decreases menorrhagia in uterine fibroids.
3	Tenderness on side of ovarian disease.
4	Tenderness in uterine disease.
5	Contracts bladder.
1-5	Tenderness in disease of bladder, rectum and anus.

Sir James states that in the treatment of heart disease and aneurism he has had most satisfactory results by utilizing

the spinal reflexes which were first discovered by Abrams, of San Francisco. He states in a recent communication to the *N.Y. Medical Journal,* Feb. 15, 1922, "Take a medium-sized cork, place one end on the seventh cervical spine, and on the other end of the cork give thirty, short, sharp taps with a plexor or small hammer. Repeat this on the second dorsal spine. Wait a minute, and then repeat this series on the seventh cervical and second dorsal. Again wait a minute and repeat the third series. This procedure, if properly carried out, will reduce the transverse diameter of a large, dilated heart by at least two inches, and the heart will remain contracted for one or two hours. At the same time the aorta is materially contracted, and the pulsation in the suprasternal notch disappears; hence this manœuvre is of great value in the treatment of aneurism. Personally, I have had many successes. Those who have difficulty in mapping out the deep cardiac area can easily feel a large thumping apex heart in the axillary line, and after percussion feel it in the nipple line.

"In the case of a big heart which does not readily respond to this reflex, the prognosis is bad. This reflex should be elicited several times daily, and it is much more effective than a similar number of doses of digitalis. As an aid in delineating the deep boundaries of the heart, if you tap the seventh cervical spine or the acromial end of the left clavicle with the middle finger of your right hand, and at the same time carry the fourth or middle finger of your left hand along the third, fourth or fifth left intercostal space, as soon as that finger reaches the border of the heart you will feel an impact of the heart against the finger, and the percussion note will become dull.

"The Abrams' cardiac reflex of dilation is elicited by percussion between the third and fourth dorsal spines, which stimulates the depressor nerve. This should be followed by percussion over the second dorsal, which I have termed a fixation complement, as it prolongs the reflex. This reflex is exceedingly useful in true angina where there is spasm of the heart, a slow, small, firm pulse, and cardiac distress. In many of these cases there is also pylorospasm with distention of the stomach; this is relieved by giving a glass of hot water, and then percussing the fifth dorsal spine.

"The best way to prevent heart disease is to preserve healthy blood vessels, and the treatment should include the peripheral circulation. Much of the modern treatment leads nowhere but to the grave."

We are beginning to recognize, as Abrams did years ago, that "the spinal cord must be regarded as a unit endowed with motor, sensory, trophic and reflex functions with regard to the peripheral distribution of the roots of the nerves which emerge from and enter it. Man is essentially a reflex animal, and even consciousness depends upon the action of the reflexes." Therefore let those of us whose brain calf-paths have been worn deeply by the routine of the knowledge of the past, think once again before we consign to limbo those who would, in the enthusiasm of newly-found truth, find in spine the sum total of all medical science. We must give due credit for their modicum of truth, be it ever so small.

Selected Articles

THE STAGE DOCTOR

With the recent production of "The Risk," in which a medical man is the leading character, it may be of interest to consider the part played by the doctor in drama. The comic doctor is one of the types "Commedia dell Arte," though il Dottore had more of the lawyer and pedagogue about him than the physician. He was second old man, and resembled Pantalone in that he was fond of the fair sex. In the mediæval French farce he became more medical, and as such was the precursor of Molière's coxcombs of the faculty. It was Molière who used the scalpel of satire so mercilessly on the persons of the medical profession. Not that the playwright had any strong personal antipathy to doctors, for he was on very friendly terms with his own medical man, Dr. Mauvillain. When Louis XIV asked Molière how he got on with his doctor, the playwright replied: "Very well indeed. He prescribes remedies. I do not take them. I recover." But no doubt the author saw the fertile field for humor to be exploited in the characteristics of the medicos. There was little protest from them because it should be noted that in those times the professors of medical science were not held in that high esteem which is accorded to them to-day. In "Le Médecin Malgré lui" occurs the famous "Nous avons changé tout celt," when the mock doctor explains that the college of physicians have changed the position of the heart from the left to the right.

A piece of scathing satire on medical etiquette is put into the mouth of one of the doctors in "L'Amour Médecin," in the lines: "A man dead is only a man dead, but a formality neglected is prejudicial to the whole body of physicians."

In Shakespeare there is the "Scotch Doctor" in Macbeth—a physician who does not reflect great credit on the Caledonian reputation for medicine, but as a canny Scot he displays "a wise and masterly inactivity" since the case is beyond his powers.

In modern times the medical man has often figured in the play. There was a very popular little farcical piece, "His Last Legs" which had a similar plot to "Le Médecin Malgré lui," the part of Felix O'Callaghan being one of Tyrone Power's most successful impersonations. There was a farcical comedy, "The Doctor," adapted by F. C. Burnand from "La Doctoresse," in which Fanny Brough played the title part, Angelina Blossom, M.D. A more celebrated farcical comedy was "Dr. Bill," in which Fred Terry and George Alexander both appeared as Dr. William Brown. Charles Hawtrey played in a revival of the piece. There have been stage versions of "Dr. Jekyll and Mr. Hyde," Richard Mansfield appearing as the good doctor in the dual part. H. B. Irving lately played the same characters. Charles Wyndham played Dr. Lewin Carey in Henry Arthur Jones's "The Physician." Wyndham was surely an ideal personification of a doctor. He must have made a fortune in the profession merely by his "bedside manner." (As a matter of fact, Wyndham in early life studied for medicine).

In Pinero's "Lords and Commons" there was a doctor, Sir George Parnacott, M.D., played by Mr. Elliott. This character of a kind, bustling West-end physician was said "to be modelled on a famous doctor of the day." In "Sweet Lavender" the same author gave us delightful Dr. Delany as the raisonneur.

Sydney Grundy provided John Hare with a splendid part of a doctor, Sir Peter Lund, Bt., M.D., F.R.S., in "A Fool's Paradise," and it proved one of that actor's finished portraits. Barrie's "Professor's Love Story" contained an excellent little sketch in Dr. Cozens. In H. B. Irving's recent revival the part was well played by Mr. Holman Clark (another actor with the doctor's "bedside manner"). It was in this play that Barrie perpetrated that very strained but very delightful little joke about "Cherchez la Femme"—a dis-

ease which so puzzled the mind of Dr. Yellowlees, the country practitioner. A doctor was the leading male part in "Dr. Wake's Patient."

That well-known doctor in fiction, Dr. Watson, has appeared in stage versions of "Sherlock Holmes." In passing, it may be remarked of this medical practitioner that his intelligence is apparently of such a feeble order that it makes us wonder how on earth he ever passed his qualifying examinations. Sir Arthur Conan Doyle created an impressive little part of a doctor in "The Fires of Fate," which Mr. Fisher White performed in his usual excellent manner. Somewhat after Molière's style, in "The Doctor's Dilemma," Shaw satirized the doctors for the vagaries in vaccine therapy. H. A. Vachell's "The Case of Lady Chamber" gave us two doctors in the dramatis personæ, played respectively by H. B. Irving and Holman Clark (if my memory serves me rightly). There was an army doctor in the "Flag Lieutenant," who had the cynical line, "If I had known more of the world, and less of medicine, I should have been in Harley Street before now."

George Alexander played the medical expert on poison in "Belladonna." Henry Arthur Jones wrote a painful one-act play, "The Knife," with a big operation scene, Arthur Bourchier appearing as a wife-wronged surgeon. And just recently we have had the Guitry play, "Pasteur."

In minor doctor parts the chief point apparently is to get the actor to look like the character. He must have the appearance of the "type." The stock device of make-up is to streak the hair by the temples with gray, and in general to resemble as closely as possible the well-known doctor's face advertising a noted wine. Finally, the stage doctor must have pince-nez spectacles (to fidget with as a rule). The old-fashioned practitioner certainly did seem to cultivate a certain style of face when whiskers were in fashion, but nowadays my personal experience tells me (and it has unfortunately been a large one) that doctors' faces vary very much. The stage doctor seems to consider it incumbent upon him to pull a long face when he appears on the scene. This is perhaps a little lacking in professional vraisemblance. As a famous physician (Sir William Gull, I think) said to a young doctor

who had a very grave expression on his face as he was about to enter a sick room with his consultant: "My dear fellow, don't go in with a face like that; the patient will think you're an executioner."

It may be added that doctors frequently figured in very small parts in minor melodramas. Owing to the gory deeds perpetrated in these plays, the presence of the doctor was often necessary. He was generally very unprofessional-looking with his seedy top hat, frock coat, and blue trousers (he had probably just played a policeman). If he examined a body after a duel, it was in a very perfunctory manner. He would place his hand on the victim's liver, take it away suddenly as if stung, and then pronounce his diagnosis, "The sword has pierced the lungs!" Doctors are seldom the villains of the piece, but Arthur Williams tells of a provincial melodrama in which the villain was a surgeon of sorts. Now the villain had had a quarrel with the low comedian behind the scenes, and the latter resolved revenge by "queering the pitch" of the other actor. So in the big scene of a hospital ward, when the wicked surgeon has the hero at his mercy in an unconscious condition, just as the villain approached his victim and breathed with venom, "Ha! now to open his vein!" the comedian advanced behind him with a bowl in his hand, and said, "Who'll catch his blood? I, said the fish, with my little dish!"—*London Daily Telegraph.*

THE HIGHER EDUCATION OF CHIROPRACTORS

What is your favorite light literature? Detective stories? Mystery stories? Humor? Have you ever read the publications issued by the various species and subspecies of the chiropractic cult—for there is, as you know, a lack of unanimity among the chiropractors. One particularly choice piece of contemporary journalism is issued by a chiropractor factory in Fort Wayne, Indiana. Its July, 1922, issue makes good hot weather reading. The editor discusses a "model bill," recently drawn up by those chiropractors of Indiana who belong to a different subspecies from those represented

by the publication in question. This Fort Wayne journal views the bill with disfavor. It says with refreshing naïveté:

To begin with there is absolutely no need of a Chiropractic licensing and examining board in Indiana to-day. The existing lot of Chiropractors in Indiana cannot be improved upon. You are not being persecuted or prosecuted, you are left severely and strictly alone to practice your profession without let or hindrance from any source or any group of any kind. In fact, Indiana to-day is the best Chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition.

But the fact that Indiana is the home of the free, chiropractically speaking, is not the only objection this journal has to the proposed bill. It seems that the bill would require applicants for chiropractic examinations to submit satisfactory proof of the possession of a preliminary education, equal to that of a high school. Perish the thought! As the editor says:

How many Chiropractors in Indiana to-day could qualify under that rule? Of all the Chiropractors in Fort Wayne, we do not happen to know of ONE that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent. of all the Chiropractors in the state.

From the point of view of the owner of a chiropractic "college" the sentiments just quoted are eminently logical. It would be entirely unfair to chiropractic schools to insist on matriculants being educated human beings. What educated human being would ever attend a chiropractic school? Of course, from the point of view of public interest—but that's another story.—*Selected.*

MODERN PLUMBING ESSENTIAL IN HOMES

Modern plumbing is the science which gives the modern home comforts and conveniences which put to shame the homes of wealth and splendor of former years, and which safeguards the health of the family and works hand in hand with medical science in the prevention of disease.

Modern plumbing is not merely a net work of concealed pipes, valves and fittings, supplying a few fixtures with water, but it is an ideal—an ideal of comfort with economy, beauty with utility, finish with durability. It has given the cottage of to-day better fixtures than are to be found in the mansions of 20 years ago.

Modern plumbing teaches us how to live and puts the means within the reach of every family. It has carried its tenets to the small village and to the farm. It has conquered stubborn opposition in its efforts to better living conditions. It has made the factory a source of pride to its owner and a model of cleanliness and sanitation to the employees. It has raised the standard of living throughout the land. It has established a greater difference between this and other countries than any other one thing in the daily life of the people.

People select the furnishings of various rooms with infinite care. But how often do they pass over the equipment of their bathrooms and their plumbing in general, with a shrug? And how much more important it is that the bathroom be properly equipped, though judiciously, there. Plumbing fixtures are used every day. They are not to be shifted about to secure variety or to satisfy a whim. They are not to be quickly discarded when fashions change. The layout of the bathroom, the selection of plumbing fixtures and especially of mechanical trimmings such as valves and faucets, which above all else should have easily renewable wearing parts—these matters are worthy of the utmost consideration.—*Selected.*

CRABBE ON DOCTORS

Although Crabbe, the poet, has partially emerged from the obscurity that invested his name and works for so many years after his death, he is still far from receiving the attention he deserves from the medical profession of which he was once a member. He had a good old-fashioned medical education. Errand boy for a time to Mr. Page, surgeon, of Woodbridge, his father later on sent him up to London "to pick up a little surgical knowledge," *a la* Roderick Random, and on his return to his native town, Aldeburgh, he became assistant to

a surgeon there. When his master departed this life Crabbe set up for himself, but does not appear to have been very successful in practice, no doubt because he was too much of a scribbler. He subsequently shook the dust from his sandals on Aldeburgh and returned to London, where he managed to publish a volume of his poems. These did not bring him in much money, but attracted the attention of Burke, with whose help he became chaplain to the Duke of Rutland, and finally settled down as a country parson. By that time, however, Crabbe had become very familiar with the conditions of a country doctor's life, a familiarity which transpires in his poetry. Their's the duty:—

> To ease the victim no device can save
> And smooth the stormy passage to the grave.

He waxes very sarcastic about the young physician who seeks to make his reputation by the writing of books:—

> With them the treatise is a bait that draws
> Approving voices—'tis to gain applause
> And to exalt them in the public view,
> More than a life of worthy toil would do.

And he adds that

> It weighs not much on what their powers be shown,
> When all his purpose is to make them known.

But Crabbe, after all, handles doctors in a kindly spirit. He had learned to appreciate the abnegation and devotion to duty of "these men of serious words and sober style," friends "with whom we seldom smile," whose devotion he asserts "springs from nobler motives than a fee." But when he turns to the subject of the quack he lashes himself into a fury —and would do so once again if he lived in our times, for conditions in this respect have not materially changed. He deplores:—

> That creatures Nature meant to clean our streets,
> Have purchased lands and mansions, parks and seats.

with "Twenty names of cobblers turned to squires," whose testimonials bolster up the quack's claim to have cured:—

Men snatched from graves as they were dropping in,
Their lungs coughed up, their bones pierced through
their skin;
Their liver all one scirrhus and the frame
Poisoned with evils which they dare not name.

And these, after taking the nostrum, "are now as roaches sound and all as brisk as bees." Crabbe's descriptions of village life in its various aspects are entertaining reading, especially so to country doctors, to whose benevolent notice we commend the lucubrations of their one-time confrère.

SURGICAL DON'TS

(Eighth Series) by

C. Hamilton Whiteford, *M.R.C.S., L.R.C.P.*
Plymouth.

Loss of interest in the case which is a Partial or Complete Failure.

Don't relegate to the care of an assistant or house-surgeon those operation cases which are doing badly.

There is a type of operator of whom it has been truly said, "He takes an interest only in those of his patients who do well."

One attribute of the good surgeon is the persistence with which he sticks to cases which, being either partial or complete failures, will only spoil his statistics and will never command the admiration of a medical meeting.

Anxious Relatives.

To anxious relatives, waiting to hear the outcome of an operation, minutes seem to be hours, and a prolongation of the operation beyond the expected time, a certain indication of disaster.

Don't omit to inform the relatives, at the earliest possible moment, that the patient has come safely through the ordeal.

Reciprocity.

Don't accept the position of honorary surgeon to a doctor and his family, when you are never asked to attend to the surgical needs of his patients.

Actions speak louder than words, and the implication, obvious and illogical, is that you are considered capable of undertaking gratuitous attendance on the doctor and his family, but incapable of treating his paying patients.

A War Product.

Do not confuse the operator with the surgeon.

The operator's sole asset is his manual dexterity.

He is happy only when operating and has neither the experience nor the grey matter which would prevent him from performing unnecessary, useless, or harmful operations. He is a distinct danger to the public.

The surgeon, while able to use his hands, is guided by his head and knows when to refrain from operating.

The war has produced a copious crop of operators, but has not correspondingly increased the supply of surgeons.

The Itinerant or Private House Operation.

Ten years ago the following statements were made: "We cannot admire those itinerant surgeons who place themselves at the service of general practitioners and offer to operate on their patients on the spot.

"The surgeon can only guarantee a successful issue in its full sense—that is, aseptic healing—when the patient is brought to his own hospital, where he has thorough confidence in the staff and the appliances and, moreover, where he has authority." (Theodor Kocher).

"The fact should be recognized that the best domestic arrangements can only inadequately serve the requirements of present-day surgery.

"Patients are very rarely made worse by a careful removal, and they often lose their lives in consequence of the most careful attempts to treat them at home." (Rutherford Morison).

To-day, itinerant operators are still making, in bedrooms, messes, which have no claim to be regarded as surgical. Such

pseudo-surgery is largely the product of men who are able to make a practice only through the commercial methods of underselling, advertising themselves in the lay press and secret commissions, a portion of the operator's fee finding its way, under various disguises, into the pocket of the general practitioner.

Don't undersell.

Don't operate in private houses.

Don't advertise in the lay press.

Don't have anything to do with secret commissions.

Diagnosis.

Faulty diagnosis is too often the precursor of erroneous treatment.

Don't make a wild shot, euphemistically termed "a shrewd idea," in the hope that it may pass muster as a diagnosis.

The laity are largely to blame for such guess-work, because of their insistence on having every illness at once labelled, and have not yet been taught that, in certain cases, an immediate diagnosis may be an impossibility.

A diagnosis should be a reasoned opinion, based upon, and justified by, ascertained facts.

When the facts are insufficient or absent, a diagnosis is impossible. Abernethy was once called in consultation on a case of obscure illness occurring in the son of a lord.

The diagnosis was not obvious and Abernethy said so.

"Well, Mr. Abernethy," replied the irate peer, "you and your colleagues are unable to say what is the matter with my son. Is there no one who can tell me?" "There are plenty," said Abernethy, "provided you go to people sufficiently ignorant."—*The Medical Press.*

PROSPECTIVE SETTLERS FOR CANADA ARE MEDICALLY EXAMINED

The rejection, on account of unsuitability, of male emigrants who were permitted to leave Great Britain for Canada, was brought to the attention of the House of Commons to-day by Right. Hon. L. C. Amery, Parliamentary Secretary to

the Board of Admiralty, who admitted that this happened in some cases, though the number of such cases was few in comparison with the total number of emigrants. He added that improvements were being effected in the arrangements for the selection of settlers, and medical examination took place prior to their departure. Col. Amery mentioned that all the Governments of the dominions had now adopted improved medical arrangements in connection with intending settlers.

Society Proceedings

THE ONTARIO SECTION OF THE AMERICAN COLLEGE OF SURGEONS

Members of the Ontario section of the American College of Surgeons, which convened in London, Ontario, on October 16th and 17th, have thrown the weight of their influence into the new campaign in Ontario to end the practise of fee-splitting, which is now regarded by the majority of members of the medical profession as distinctly undesirable, if not to be bluntly condemned.

Dr. Franklin H. Martin, C.M.G., of Chicago, Director-General of the American College of Surgeons, speaking on the relations between the profession and the public, stated that the organization which he represents is campaigning against the practice, which has been followed to a great extent in the United States and to a lesser degree in Canada. Fee-splitting he defined as the practice in which a general practitioner decides that a patient requires a surgical operation, and turns his patient over to a surgeon on condition that he gets a portion of the operation fee. The American College is attacking fee-splitting by standardizing hospitals. In a standard hospital a minimum requirement of efficiency is fixed so that a patient may be assured that proper records of his case are being kept, that suitable facilities for diagnosis are provided, and that the utmost is being done to bring about his recovery.

In such standardized hospitals surgeons are bound by iron-clad obligations of the College to refrain in all cases from fee-splitting.

Rev. C. B. Moulinier, S.J., president of the Catholic Hospital Association, declared that the great task of the time is to make the public realize that the medical profession is as bound to give of its experience and training in the public service, with or without pay, as is a religious leader to give religious assistance.

The delegates to the College Convention devoted considerable time to attendance at clinics and clinical demonstrations conducted in Victoria Hospital and St. Joseph's. One of the most distinguished clinicians is Dr. Leonard Rowntree, a Londoner, and graduate of Western, who is now Director of Medicine in the Mayo Foundation of Rochester, Minn., and one of the outstanding figures in medical research in the United States to-day. Other events were an address on the "Bad Risk Patient," by Dr. George W. Crile, Professor of Surgery in the Western Reserve University School of Medicine, Cleveland, Ohio; a study of maternity methods by Dr. John Osborn Polak, Professor of Obstetrics and Gynæcology, Long Island College Hospital, Brooklyn, N.Y., and an address on fracture of the spine and sarcoma of the bone by Dr. G. E. Richards, of Toronto.

Dr. A. J. Stillman, of Ottawa, was elected chairman of the Ontario Section of the American College of Surgeons, in succession to Dr. George McNeill, of London, at the closing meeting of the convention. Dr. George Ramsay, of London, was chosen Secretary, and Dr. Lorne Robertson, of Stratford, Counsellor. The next convention of the Ontario Section will be held in Ottawa in 1923.

At the clinics held in the local hospitals on the Tuesday, much stress was laid upon the necessity of annual examinations as a means of fighting disease. In this connection one of the speakers advocated "birthday examinations" for the purpose of systematizing the securing of physical examinations by the people at large. It was explained that the early discovery of any disease renders the effecting of a cure a comparatively easy matter, whereas, when once disease takes a hold on the system a cure is extremely difficult.

Dr. Septimus Thompson, of London, an eye, ear, nose and throat specialist, declared that the necessity for radical operations in nose and throat surgery occurs only in a minimum of cases, and that the simpler methods and early treatment are to be preferred.

Dr. George Crile, of Cleveland, spoke on "The Bad Risk Patient," and enumerated the difficulties encountered in dealing with advanced cases, outlining the best recognized methods of handling such patients.

Dr. John Osborn Polak, of Brooklyn, N.Y., stated that pre-natal care takes a first place in the lowering of the death rate of mother and child.

Diabetes, goitre and kindred thyroid troubles, heart disease and kidney affections, were dealt with in an interesting way by Dr. Leonard Rowntree, a former Londoner and a graduate of the Western Medical College, who is now associated with the Mayo Clinics at Rochester, Minn. He strongly advocated periodical examinations for the purpose of detecting early traces of such diseases.

Dr. Hadley Williams, Dr. Emerson Hodgins, Dr. A. J. Grant and Dr. Edwin Seaborn of London, Dr. A. Primrose and Dr. H. Bruce, of Toronto, also conducted clinics in the hospitals during the day.

A dinner was tendered the guests at noon by members of Victoria Hospital Trust, and it was held in the new War Memorial Hospital for Sick Children on Ottaway Avenue. A school hygiene exhibit there attracted much attention and was closely examined by the visiting physicians.

Dr. M. T. MacEachern spoke in the afternoon on public health before a joint meeting of doctors and nurses, which was held under the auspices of the Victorian Order of Nurses.

By a standing vote the meeting carried a resolution expressing deep regret at the death of the late Dr. C. S. Moore, of London, and it will be forwarded to the family of the deceased.

Another resolution expressed appreciation for the work done at the old Western Medical College, by Drs. John Wishart, F. R. Eccles and W. Waugh, of London, and Dr. D. B. Fraser, of Stratford.

Personals

UNIVERSITY APPOINTMENTS

The following University appointments were recently made: Dr. F. A. Cleland, assistant professor in the Department of Obstetrics and Gynæcology; associates, Drs. W. A. Scott, J. G. Gaillie and N. D. Frawley; senior demonstrators, Drs. R. W. Wesley, W. W. Lailey and W. G. Cosbie; junior demonstrators, Dr. H. B. VanWyck and D. M. Low; Department of Oto-Laryngology, associates, G. M. Biggs and E. Boyd; senior demonstrator, J. C. Calhoun and A. A. Campbell; junior demonstrator, Jane S. Manson and D. E. S. Wishart; Department of Medicine, Drs. E. A. Broughton and F. G. Banting, senior and junior demonstrators; assistant professors, ophthalmology, Drs. D. N. MacLennand and W. H. Lowry.

Dr. James W. Ross has returned from Post Graduate work at the Mayo Clinic, and opened at 64 Bloor Street E., where he will be associated with Dr. Herbert Bruce. Dr. Ross will confine his practice to surgery and cystoscopy.

Dr. Marchand B. Whyte has opened an office at 244 Bloor Street W. He will confine his practice to diseases of the Ear, Nose and Throat.

MEDICOS PASSING TEST AT McGILL

The following candidates were successful at the recent examinations at McGill, as reported by the Registrar, Dr. R. W. Powell, of the Medical Council of Canada. This registration is under the provisions of the Canadian Medical Act, which grants a qualification of L.M.C.C., accepted for registration and license in every Province of Canada.

The successful candidates are: A. Achpise, Paris, France; H. McC. Allen, Toronto; J. M. Baxter, St. John, N.B.; F. G. Beall, Westmount, Que.; E. M. Blair, Truro, N.S.; Jessie M. Boyd, Westmount, Que.; E. B. Chandler, Moncton, N.B.; C. G. Clements, Wapella, Sask.; J. G. Copeland, Cornwall, Ont.; R. B. Coulson, Ottawa; C. T. Coulter, Malone, N.Y.; N. Desbrisa, Toronto; C. L. Emerson, St. John West, N.B.; T. H. Field, Edmonton; R. FitzGerald, Calgary, Alta.; C. Fluhmann, Kenogami, Que.; D. C. Gordon, Ottawa; J. H. Grant, Port Elgin, N.B.; R. S. Grimmett, Edmonton; H. Hart, Westmount, Que.; H. F. Howe, Palmerston, Ont.; J. C. Humphreys, Kinburn, Ont.; K. O. Hutchison, Montreal; J. C. Imbleau, Renfrew, Ont.; H. M. Jardine, Moncton, N.B.; F. L. Jones, Ottawa; A. T. Kibzey, Winnipeg; J. M. Kinsman, Wolfville, N.S.; W. Laishley, Ottawa; P. A. Lyster, Red Willow, Alta; J. McGregor, Victoria, B.C.; J. F. McIntosh, Westfield Beach, N.B.; D. W. McMillan, Westmoreland, N.Y.; E. C. McLeod, Plenty, Sask.; J. S. Murray, River John, N.S.; N. K. Neilson, Arnprior; F. L. O'Shaughnessy, Cobalt, Ont.; H. A. Pierce, Edmonton; H. H. Sharp, Sussex, N.B.; G. F. Strong, Vancouver; N. T. Williamson, Westmount, Que.

Dr. D. E. Staunton Wishart wishes to announce the opening of his office at 47 Grosvenor Street, Toronto, and that his practice will be devoted exclusively to the diagnosis and treatment of diseases of the ear, nose and throat including oesophagoscopy, bronchoscopy and neuro-otology.

Dr. Henry G. Robb announces the opening of offices in the Imperial Bank Chambers, corner of Bloor and Yonge Sts., Toronto. Practice limited to the extraction of teeth and dental X-ray.

HOSPITAL FOR INCURABLES NEEDS NEW WING AND A LARGER HOME FOR NURSES

An appeal went forth to the Ontario Government and the city of Toronto from the annual meeting of the Hospital for Incurables for grants of $100,000 from each to defray the cost of extensions to the building. It is proposed to erect a new wing to house 130 additional patients, and also to enlarge the nurses' home to make provision for several on the staff who are at present housed outside and to accommodate extra nurses.

The need for greater accommodation was emphasized by Ambrose Kent, chairman of the board of management; Dr. E. E. King, secretary of the medical board; Dr. A. Davidson, Col. Noel Marshall, and in the reports of Miss E. M. Cook, superintendent, and Miss I. M. Groat, secretary-treasurer.

For several months the capacity of the institution has been taxed to its utmost limit and many deserving cases have been unable to obtain admission. There are now thirty-two on the waiting list. It was felt that as the hospital is caring for over a hundred Toronto cases in excess of its obligation to the city council, and since the large number of patients from outside justify its claim to be regarded somewhat as a provincial institution, the province and the city should shoulder the building cost, estimated at $200,000. The plan, if carried out, would meet all requirements for five or six years.

Col. Marshall was sufficiently optimistic to predict the foundation-stone laying ceremony in a few months and he suggested that the lieutenant-governor who presided at the meeting, might officiate at that ceremony.

"It is a lack in humanity for this place to be curtailed in its efficiency," said Dr. Davidson, as he visualized the disappointment of waiting applicants when told no approximate date could be given for their admission.

"There is no institution that is doing a better or more Christ-like work," said Ambrose Kent. The inmates looked upon it as a real home and the efficiency and kindness of the

staff were unsurpassed. The finances had been so carefully managed that a deficit of $9,000 accumulated during the war had now been wiped out and there was a small surplus.

The people clamoring for admission must be provided for, declared Mr. Kent, and it was "up to somebody" to erect the new buildings. If the government and city would pay for them, the hospital would provide the necessary furnishings and equipment. He intended to lay the matter before the legislature and the city. "We have claims which should be met in the interests of the suffering public."

"There is a noble band of men and women in the city of Toronto who cannot be equalled anywhere on earth," said the lieutenant-governor in a general tribute to the management, staffs and supporters of the city's institutions. "The work they do is simply wonderful and marvelous."

"If, as an outsider, I may take the liberty of thanking the men and women of Toronto for the work they have done for this city and this province I think I will not be overstepping the bounds of what we all honestly think in this great province of Ontario.

"It is Toronto that sets the example to this province" continued his Honor. "We may throw bricks sometimes, but from the bottom of our hearts we know the people of Toronto are doing the work, which sometimes we neglect in smaller places."

His Honor referred particularly to the self-sacrifice and devotion of the nursing staff of the Hospital for Incurables, "We have our duty to perform by trying to aid them—perhaps not by work—but by financial aid, and I hope this institution will get sufficient financial aid to carry out this great work."

Book Reviews

THE CANADIAN MEDICAL DIRECTORY

SIXTH EDITION.

This is a volume of more than 500 pages, revised and brought up to date, and will contain a general list of physicians and surgeons, dentists, druggists and veterinary surgeons, etc., established in Canada and Newfoundland, classified in alphabetical order, by provinces, towns and post offices. *The Canadian Medical Directory* includes the complete list of names and addresses of Medical Associations, Hospitals, Asylums and Sanatoria; the officers of the various Boards of Health and the names of professors of medical faculties of the English and French Universities in Canada; the laws and regulations governing the practice of medicine, surgery and attendance to confinement cases in each of the Provinces and Newfoundland; full details concerning reciprocity between the United Kingdom, the colonies and foreign countries (Medical Act, 1886-1905) and the organization and functioning of the Medical Council of Canada, with a complete list of physicians having obtained a federal license.

It will contain desirable information to those practising medicine generally and the various branches of Medicine, and, beginning with the coming edition, will constitute the most complete and unique publication of its kind. It will thus be an indispensable volume for the library of all physicians, as well as Institutions or business enterprises connected or dealing with these professions.

The sixth edition will be off press early in January and, as previous editions, will be sold in two different forms: A commercial edition, paper-bound, selling at $5.00 per volume, and a cloth-bound edition, in imitation leather, at $6.00 per volume. For full information apply to *The Canadian Medical Directory, Montreal.*

Hughes' Practice of Medicine, including a section on Mental Diseases, and one on diseases of the Skin. Twelfth edition, by R. J. E. Scott, M.A., B.C.L., M.D., New York. With 63 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

The reviewer knows of no better compendium than this well-tried manual, whether for the undergraduate, who wishes a comprehensive view of General Medicine, or for the busy man in general practice. Apart from the excellence of the classification, and the marked modernity of this last edition, the most striking feature of the book is the attention paid to treatment, surely a desirable feature in these days of the technician as against the clinician.

Obstetrics for Nurses. By Joseph B. DeLee, M.D., Professor of Obstetrics in the North-western University Medical School, Chicago. New (6th) Edition, Entirely reset. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $3.00 net. Canadian Agents the J. F. Hartz Co., Limited, Toronto, Ont.

A primary book for medical students also. Treats of obstetrics for nurses and the actual obstetric nursing, combined so that the relations of one to the other are naturally helpful. Since the last edition, five years ago, the text has been revised and brought up to date. New subjects are introduced and more space devoted to Cæsarian section. The technic for maternities has been given more space and the methods used at the Chicago Lying-in Hospital more fully presented. A good glossary and index complete the book. Illustrations apt and clear, printing good—all on calendered paper.

Medical Record Visiting List or *Physicians' Diary,* revised. William Wood & Co., Medical Publishers, New York. Price 2.00 net.

The Medical Record Physicians' Diary is a welcome visitor and for 1923 as much as ever. It is a little better than

ever—indeed a *Multum in Parvo*—Containing a wealth of most useful information, apart altogether from its features as a Record of Visits for each day throughout the coming year. A practitioner can hardly do without it. It costs but $2.

Preventive Medicine and Hygiene, by Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard; Director of the School of Public Health of Harvard University and the Massachusetts Institute of Technology; Director of the Hygienic Laboratory, U.S. Public Health Service, etc. With Chapters upon *Sewage and Garbage,* by George C. Whipple, Professor of Sanitary Engineering, Harvard; *Vital Statistics,* by John W. Trask, Assistant Surgeon-General, U.S. Public Health Service; *Mental Hygiene,* by Thomas W. Salmon, Medical Director, National Committee for Mental Hygiene, etc. Fourth edition. New York and London: D. Appleton & Company. 1921.

The fourth edition of Rosenau's Preventive Medicine, shows every evidence of being largely rewritten. Its author has revised the greater part of his previous volume and is to be congratulated on now giving the profession a work that will doubtless stand as an authority on all matters relating to Public Health, for many years to come.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Ophthalmoscopy, Retinoscopy and Refraction by W. A. Fisher, M.D., F.A.C.S., Chicago, Ill. With 248 illustrations, including 48 colored plates. Published by W. A. Fisher, M.D., F.A.C.S., 31 North State St., Chicago, Ill.

WANTED—A House Officer for this winter, until June first next, for hospital connected with Dr. Grenfell's Mission and located at St. Anthony, Northern Newfoundland. Salary $500 and all expenses. Work is varied and interesting. Apply to Dr. W. R. MacAusland, Chairman Staff Selection Committee, 240 Newbury St., Boston, Mass.



HALITOSIS

As defined in the Century Dictionary

(Hal-i-to-sis) N. N. L.
(L. Halitus—Breath Osis—Offensive)

Offensive breath, whether arising from diseased or neglected conditions of the teeth, mouth or nose or caused by disorders of digestion, respiration, the excessive use of tobacco, etc., may be readily overcome by the deodorizing properties of—

LISTERINE

Listerine is strictly antizymotic, it inhibits alike the acid fermentation of carbohydrates and the alkaline putrefactive processes of mixtures of meat and saliva, retained as debris about the teeth; hence, Listerine is antagonistic to the activating enzymes of fermentation so often the cause of Halitosis.

The volatile antiseptic constituents of Listerine—thyme, eucalyptus, gaultheria and mentha, combined with baptisia, boric acid, rectified spirits and water have a stimulating effect upon the stomach and in proportion to the dose, an action inhibitive to fermentation of its contents; hence, Listerine is often corrective of those disorders associated with the endo-development of gases and acid eructations. A large tablespoon of Listerine in a wine glass of hot water will afford immediate relief.

Lambert Pharmacal Company

263-265 Adelaide Street West, - - Toronto

TARTAR

Tartar is a complex deposit composed of salts and proteids precipitated from saliva. It deposits permanently on the teeth largely because the tooth surface is hard and rigid. It also deposits on the mucous membrane but only temporarily because of the pliability of the tissues. When it is first deposited it is soft and gelatinous and known as an albuminous plaque or film. Later it hardens, due largely to chemical change in the salts. Very old tartar is quite hard, but its hardness probably never exceeds 1.5 to 2.0. It is difficult to remove because of its organic constituents, which coagulate and harden into a very tenacious, cement-like substance. Freshly deposited tartar and mucin plaque can easily be removed by a polishing agent having a hardness of 2.5 to 3.0. Old, well hardened tartar can only be removed by means of dental instrumentation.

It will be seen, then, that a polishing agent, recommended for daily use, must be without effect upon the softest portion of the tooth with which it comes in contact, *i. e.,* cementum and dentin, with a minimum degree of hardness of 3.5. It must not have a greater polishing power than a substance which has a hardness of 3.5.

The polishing power of a substance may be reduced by the addition of another substance of substantially lower degree of hardness. This is precisely the principle Pepsodent utilizes in the preparation of its excellent polishing agent.

Pepsodent combines the hardness of tricalcium phosphate, which stands at 5, with anhydrous calcium sulphate having a degree of hardness of 1.7, to produce a polishing agent of precisely the proper degree of polishing power. This combination —mitigated calcium phosphate—as has been proven by innumerable tests and experiments, cannot possibly injure the enamel or exposed cementum or dentin areas because it is softer than tooth substance. It represents the polishing power of a substance having a hardness of from 2.5 to 3, while tooth substance, including enamel, varies from 3.5 to 7. It is, however, very effective in keeping teeth clean, as the profession well knows from observation.

ALWAYS SOOTHING AND RESTORATIVE

One teaspoonful of Sanmetto four times a day will be found most effective in bladder irritation from any cause. In acute cystitis, where the pain is quite acute during urination, Sanmetto is almost a *sine qua non.* This remedy has for many years been prescribed by physicians, and its sales are steadily increasing. *Nuf sed.*

Promoting a Favorable State of Mind

On the borderland of illness or convalescence, patients frequently tend towards a morbid state of mind.

The usual habits of active life perhaps have been, or must be suspended. Daily existence seems one negation after another. And most irksome of all is the restricted diet.

In such cases, when even the limited use of coffee or tea is contra-indicated, Instant Postum may be a source of much comfort and satisfaction, and therefore a vital factor in promoting a brighter mental outlook.

Instant Postum is one of the most convenient of beverages for sick-room or hospital use, since it is prepared instantly in the cup by the addition of hot water, and may be purchased from the nearest grocer at moderate cost.

Samples of Instant Postum for individual and clinical examination will be sent on request to any physician who will write for them.

Canadian Postum Cereal Company, Ltd.
45 Front St., E. - Toronto
Factory: Windsor, Ontario

CHRONIC INTESTINAL INDIGESTION

This chronic disorder frequently follows the acute form of indigestion, especially in children who are below par in general health and vitality. As in the acute variety, the condition is not one of positive bacterial invasion, but rather a negative state, in which there is a general inadequacy on the part of the normal intestinal flora to fulfil its function.

The patient should, if possible, be removed to the country, preferable to the seaside or the mountains, and given the advantages of a rigorous hygiene. The diet needs the most careful individual selection and adjustment in each case; but the general principle is that it should consist of concentrated, predigested food, such as beef peptonoids, egg albumen, whey, malted foods, etc. The bowel should be frequently irrigated, clear up to the colon, with tepid water, to which listerine has been added in the proportion of two ounces to the pint, but no astringents. Injections of olive oil and cacao butter are also useful to assist nutrition.

FELLOWS' SYRUP OF THE HYPOPHOSPHITES

The following letter is worthy of perusal:

Dear Doctor,—At the beginning of the Great War we placed at the disposal of the principal Allied Nations a quantity of Fellows' Syrup of the Hypophosphites, and we learned with considerable satisfaction that its use greatly contributed to the relief of the sick and wounded. Attention should be called to the results obtained from the use of Fellows' Syrup in the Military Hospitals of France in cases of disorders, sensory, psychic, and motor in character, including the different phenomena resulting from excessive fatigue and shock of the nervous system. The beneficial results obtained are due, in the first place, to its happy formula and, in the second place, to the excellence of its manufacture. Its formula embraces potassium, sodium, iron, manganese, and phosphorus in the form of hypophosphites, together with the alkaloids, quinine and strychnine—the latter in the proportion of one sixty-fourth grain to the fluid drachm.

WATERBURY'S COD LIVER OIL COMPOUND

It will be of therapeutic interest to the Profession to know that Waterbury's Cod Liver Oil Compound is one of comparatively few products on the market with a real vitamine content. This preparation is too well known to need any introduction to Canadian physicians, beyond saying that it is made from Cod Liver Oil by the enzymotic action of the spleen, pancreas, etc., and that, because of its vitamine content, it gives prompt results, Cod Liver Oil being one of but five articles of food known to science containing fat soluble Vitamine "A."

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Like many good things there is no mystery about Mead's Ethical Policy—but there is MUCH OF GOOD SENSE.

Mead's Slogan—"Consult the Doctor First"

MEAD'S DEXTRI-MALTOSE is an ethical infant diet material offered to physicians who wish to modify cow's milk for the individual requirements of babies.

MEAD'S "D-M" is not advertised in women's magazines, newspapers, or any lay publications.

MEAD does not print feeding directions on the "D-M" package.

MEAD does not advise mothers how to feed their babies by mail—

BECAUSE

Successful infant feeding cannot be done by the correspondence method.

When the doctor uses "D-M" he gets results because his own creative talent has full scope and he is not hindered by "outside interference."

A quality product marketed in this ethical manner must necessarily give results in most cases since it is offered only for the consideration and approval of physicians.

The Doctor's confidence is not misplaced

The Mead Johnson Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

Please write us for samples and literature

Mead Johnson & Co. of Canada,
LIMITED
163 Dufferin St. - Toronto

CARE IN THE PRODUCTION OF MILK

Many cases are on record showing that sickness and disease have frequently been the result of carelessness in the production of milk.

Fortunately, however, recent years have witnessed marked improvements in the methods of handling milk. In fact, one Toronto dairy—The Farmers' Dairy— has since its inception done everything in its power to safeguard their customers. They recognize what an important part milk can take in the maintenance and improvement of public health, and act accordingly.

The care exercised by them begins right at the source of the supply—the cows. These cows are kept on the clean, modern farms of the farmer-shareholders, and are regularly examined by the dairy's inspectors. When the milk arrives at the dairy —a dairy equipped with the last word in milk machinery, it is scientifically pasteurized in the "Jenson Coil Pasteurizers." The processes of cooling and bottling the milk are given the utmost attention by the Farmers' Dairy.

Such methods as these should be encouraged by every physician, for they contribute materially to the successful promotion of the crusade for better health.

STIMULATES THE DIGESTION

Careful investigation of the action of Bovinine shows that it acts, primarily, by stimulating the digestive and absorptive processes, and by imparting tonicity to the whole nervous system. The hepatic and the various secretory functions are increased, and a more substantial assimilation of nutriment follows as a natural sequence, and it gives to the system every element required to properly sustain it. In other words, proper balance between waste and repair is brought about.

PLUTO WATER

The fact that Pluto Water may be found in almost every hospital in the country is quite conclusive evidence that where an enema is often needed and prescribed there Pluto Water is always at hand, and that is in the hospital.

Pluto Water is the product of French Lick Springs, of French Lick, Ind., where probably more worn-out business men go for a speedy renovation than to any other point in America. As one cannot go to French Lick whenever he needs a few days' rest and cleaning out, why not do the next best thing—take a rest at home and use bottled Pluto Water.



No—

Pepsodent does not scratch

The polishing agent is softer than the enamel.

We have brushed natural teeth with Pepsodent 250,000 times without the slightest ill effect. One authority we know has brushed soft gold with it 150,000 times.

Pepsodent omits soap, because modern authorities desire a tooth paste to be mildly acid. That absence of soap—a lubricant—is what makes the polishing agent conspicuous.

Pepsodent, being mildly acid, stimulates the salivary flow. It increases the ptyalin in saliva, to better digest starch deposits. It increases the alkalinity of saliva, to better combat mouth acids.

It combats mucin plaque in two effective ways.

By meeting these requirements in ideal ways, it has won dentists and dental authorities nearly all the world over. Millions of people of some forty nations now use it, largely by dental advice.

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A GOOD LOCATION

Bloor Street West, Toronto, and Lower Avenue Road are attracting many medical men. Bloor is the leading thoroughfare east and west through the city. Locations on this splendid street are good for business and make a fine investment, as properties along it are rapidly advancing in value. The corner of Bloor and Avenue Road is considered the best location for doctors in Toronto, finely residential and not far from the best shops. What adds to its attractiveness is its proximity to the Hampton Court Garage, at 162 Cumberland Street, just a minute's walk from this busy corner. Here is the doctors' rendezvous. Here they keep their cars, have them repaired, washed, watered, aired. The young men employed are alert, efficient and courteous. H. H. Hambledon, Proprietor.

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"There may be other preparations of Barley, but I have known none for the past twenty-five years but Robinson's. It seems to be standard. In fact, I have never used any preparation other than Robinson's. Its field of usefulness is unlimited in certain kinds of cases."

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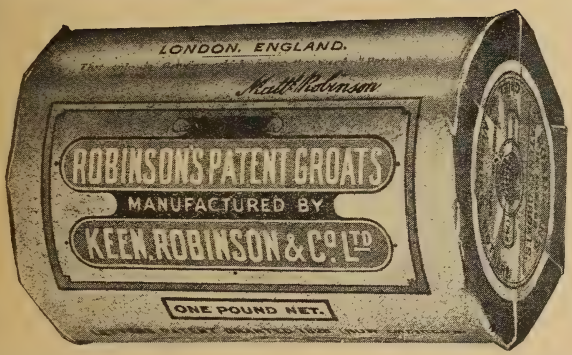
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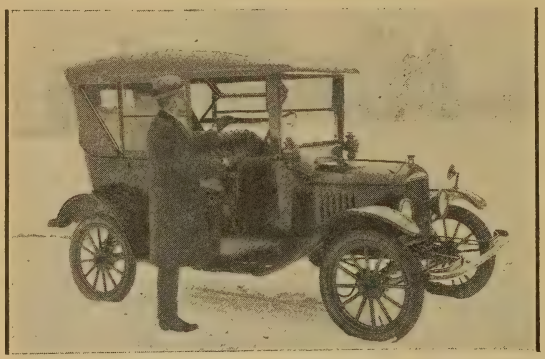
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Pure Cane Sugar, Pure Lemon Juice and Vichy. A wonderful and healthful drink.

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TO the physician treating a case of diphtheria or immunizing a child prophylactically, what is it worth to be sure that the Antitoxin or Toxin-Antitoxin used is absolutely dependable? What is it worth to know that he is fighting the disease with products both safe and potent?

The efficacy of Antitoxin and Toxin-Antitoxin in the control of diphtheria has been definitely established. The dependability of these products is predicated on that of the laboratory which makes them. Equipment, personnel, supervision—all of these must be of a high order to insure a trustworthy product. But above all the laboratory supplying these vitally important immunizing agents must be dominated by ideals of service and must be deeply conscious of its responsibility.

"DIPHTHERIA IMMUNIZATION," a reprint, sent upon request.

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WALKERVILLE, ONTARIO

Liquid Petrolatum in Colitis



Chronic colitis, dilatation of the catarrhal right colon, the whole viscus in irritation as shown by the excessive peristalses throughout. Fermentative type of toxemia present.

From "Diseases of the Digestive System," by Anthony Bassler, M.D., F.A.C.P. Published by F. A. Davis Co., Philadelphia.



Normal Colon

An enterologist of international repute calls attention to the value of liquid petrolatum in colitis. In connection with such routine measures as proper diet, he finds that liquid petrolatum aids greatly in soothing the irritated surfaces and, through softening the intestinal contents, helps to overcome the spastic condition of the intestine.

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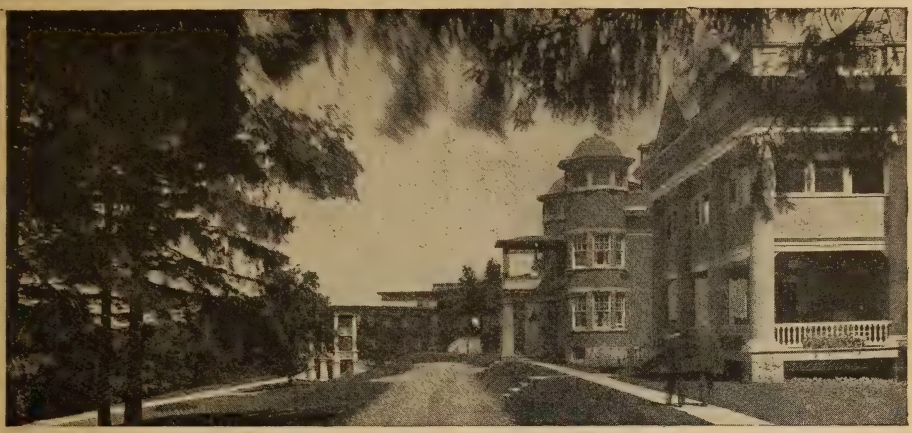
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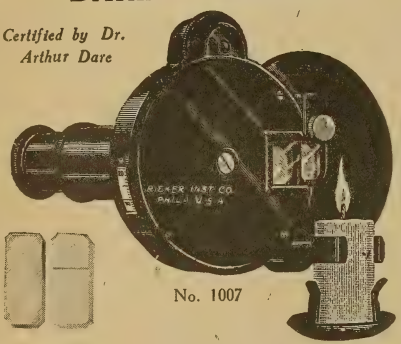
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